

PORSCHE

Application for Certification: Initial Part 1

Model Year: 2021

Durability Group: MPRXGPGNNCT6

Test Group: MPRXT03.0CV6

Evaporative/Refueling Family(ies): MPRXR0150REE
MPRXR0140RMA

Certification Summary Information Report Number(s): CSI-MPRXT03.0CV6-MPRXR0150REE
CSI-MPRXT03.0CV6-MPRXR0140RMA

Durability Group Description: Four Stroke, Otto Cycle, Gasoline-Fueled Direct Injection, Catalyst Code: Johnson Matthey 869, Unheated Monolith Ceramic Catalyst

Test Group Description: 3 Liter 6-Cylinder LDT3
2.9 Liter 6-Cylinder LDT3
3 Liter 6-Cylinder LDT2

Applicable Standards: EPA Exhaust: T3B70
CARB Exhaust: LEULEV70
EPA Evap: Tier 3
CARB Evap: LEV III
EPA Evap (140RMA): Tier 2
CARB Evap (140RMA): LEV II

Carlines Covered: Cayenne
Cayenne Coupé
Cayenne S
Cayenne S Coupé
Macan S
Macan GTS
Macan Turbo

Vehicles Tested: Exhaust: ECFE-9YAS-19
Evap: EC-9YA-19
Evap: EC-95BII-19

EPA Response Requested By: 12-Oct-20

Special Instructions: Exhaust: Carryover
Evap: Carryover

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Section 1~Correspondence and Communications

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Section 2~Durability Group Description

Durability Group Name: MPRXGPGNNCT6

Combustion Cycle: Four stroke, Otto Cycle

Engine Type: 6-cylinder, V-arrangement

Fuel Used: Gasoline

Basic Fuel Metering System: Direct fuel injection

Catalyst Construction: monolith

Catalyst Type: palladium and rhodium three way catalyst

Model(s):

Catalyst Pre- and Main Bricks:
Precious Metal Composition, Main Cat:
Precious Metal Composition, Pre-Cat:
Precious Metal Loading, Pre Brick 1 (g):
Precious Metal Loading, Main Brick 2 (g):
Number of cans (lines):
Total Precious Metal Loading (g):

Cayenne / Coupe	Cayenne S / S Coupe
Both	Both
[0:14:1]	[0:14:1]
[0:12:1]	[0:14:1]
8.522	4.000
3.983	2.081
1	2
12.51	12.16

Model(s):

Catalyst Pre- and Main Bricks:
Precious Metal Composition, Main Cat:
Precious Metal Composition, Pre-Cat:
Precious Metal Loading, Pre Brick 1 (g):
Precious Metal Loading, Main Brick 2 (g):
Number of cans (lines):
Total Precious Metal Loading (g):

Macan S	Macan Turbo and Macan GTS
Both	Both
[0:14:1]	[0:14:1]
[0:14:1]	[0:14:1]
6.556	4.000
2.655	2.079
1	2
9.21	12.16

	<u>GS</u>	<u>% of Max GS</u>
Cayenne / Coupe	4.2	100%
Cayenne S / S Coupe	4.2	100%
Macan S	3.1	74% see note
Macan Turbo and Macan GTS	4.2	100%

Note: blank cells or tables are intentionally blank.

Note: EPA has approved inclusion of Macan S in the Cayenne durability group, with a “% of max GS” under 75%.

Section 3~Evaporative / Refueling Family Description

Evaporative/Refueling Families

Please refer to Section 3 of the LDT Common Section for a detailed description of this Evaporative/ORVR system.

Family Name	MPRXR0150REE
Carryover Family	LPRXR0150REE
Models Covered	Cayenne Series
In-Use Performance	Not available
ORVR Family Carryover	Originally approved by EPA 10/16/2002 (1) No substantial changes have been made from the previously certified system (2) Porsche is not aware of any in-use problems with this system as of this time

Note: evaporative family KPRXR0150RED is not carried over, as it is identical to KPRXR0150REE; MPRXR0150REE conforms to the more stringent evap FEL.

Family Name	MPRXR0140RMA
Carryover Family	LPRXR0140RMA
Models Covered	Macan Series
In-Use Performance	Not available
ORVR Family	Based on the approved Audi ORVR Family EADXR0140B8A. Please refer to Audi LDT Common Section documentation for an ORVR system description. (1) No substantial changes have been made from the previously certified system (2) Porsche is not aware of any in-use problems with this system as of this time

Section 4~Durability Procedure Description

Exhaust / Evaporative Deterioration

Based on Porsche's engineering judgment, all the vehicles described in this Application for Certification comply with all applicable useful life standards.

Exhaust Deterioration Factors (g/mile):

Additive exhaust Deterioration Factors were developed new for the next generation (MY '19) Cayenne, Cayenne S, and Macan S, and were developed by Audi using an EPA-approved ADP.

<u>Basis</u>	<u>NMOG</u>	<u>NOx</u>	<u>NMOG + NOx</u>	<u>CO</u>	<u>HCHO</u>	<u>N2O</u>	<u>CH4</u>	<u>PM</u>	<u>CREE</u>
150K *	0.0082	0.0160	0.0242	0.26	0.0000	0.0010	0.0034	0.000	0.43

* N2O and CH4 basis is 120K

Evaporative Deterioration Factors:

MPRXR0150REE

Additive evaporative Deterioration Factors for Cayenne and Cayenne S were developed by Audi for evaporative family KPRXR0150REE using an approved ADP, and are carried over here to 2021 MY.

<u>Basis</u>	<u>2-day</u>	<u>3-day</u>	<u>RL</u>	<u>ORVR</u>
150K	0.0108	0.0140	0.000	0.007

MPRXR0140RMA

Additive evaporative Deterioration Factors for Macan models are "Safety Margin" DFs, as explained in Porsche's October 16, 2018 letter to EPA.

<u>Basis</u>	<u>2-day</u>	<u>3-day</u>	<u>RL</u>	<u>ORVR</u>
150K	0.085	0.065	0.01	0.02

Section 5~Test Group Description

Test Group Name:	MPRXT03.0CV6
Certification Summary Information Reports:	CSI-MPRXT03.0CV6-MPRXR0150REE CSI-MPRXT03.0CV6-MPRXR0140RMA
No. Cylinders and Arrangement	6-cylinder, V-arrangement
Engine Displacement:	3 Liter 2.9 Liter
Hybrid Description:	N/A
High Voltage Battery Description:	Type: N/A Nominal Voltage: N/A Usable Capacity: N/A Grid Charge Voltage: N/A
Electric Motor Description:	Type: N/A Nominal Voltage: N/A Rated Power: N/A
Vehicle Classe(s):	LDT2: Macan Series LDT3: Cayenne Series
NLEV Participation:	No
Emissions Standards Class:	Federal: T3B70 California: LEULEV70
Applicable Emissions Standards:	Please refer to the Certification Summary Information Report in Section 7

Section 6~Test Vehicle Description

6.01>> Test Vehicles

	Test Vehicle ID	Configuration	Vehicle/Config Purpose
Certification Test Vehicles:	ECFE-9YAS-19	0	Emission Data
	EC-9YA-19	0	Evap Data
	EC-95BII-19	0	Evaporative Data

Please refer to the Certification Summary Information Report in Section 7 for detailed descriptions of the Certification test vehicles.

Test Vehicle Information	Exhaust	Evaporative	Evaporative
Test Group Name	MPRXT03.0CV6	MPRXT03.0CV6	MPRXT02.0MR4
Evaporative Family Name	MPRXR0150RED	MPRXR0150RED	MPRXR0140RMA
Test Vehicle ID	ECFE-9YAS-19	EC-9YA-19	EC-95BII-19
Test Vehicle Model Name	Cayenne S	Cayenne	Macan
Engine Code	DCA	DCB	DLH
Displacement (L)	2.9	3.0	2.0
Rated Engine Power (HP)	434	335	248
Transmission	AT	AT	AT
Equivalent Test Weight (ETW) (lbs)	5250	5000	4500
Gross Vehicle Weight (lbs)	6261	6239	5534
Axle Ratio	3.21	3.21	4.67
Drive Mode for Testing	AWD	AWD	AWD
SIL usage	No	No	No
Start - Stop	No	No	No
Aged components	No	No	No
Fuel	Gasoline	Gasoline	Gasoline
Drive Source	ICE	ICE	ICE
Fuels stored separately or together	N/A	N/A	N/A
Fuels combusted separately or together	N/A	N/A	N/A
RESS type	N/A	N/A	N/A
Off-board charge capable	N/A	N/A	N/A
Regenerative Braking	N/A	N/A	N/A

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Section 6~Test Vehicle Description

6.02>> Test Parameters, Instructions

Carlines		Cayenne Series (V6 engine)	Macan Series (V6 engine)
Engine Starting Procedures		1) Depress brake pedal 2) Set gear selector to position "P" 3) Turn ignition key clockwise to crank (do not depress accelerator pedal), release key as soon as engine starts 4) If engine fails to start within 15 seconds, turn ignition key to the OFF position, wait 10 seconds, then restart	1) Depress brake pedal 2) Set gear selector to position "P" 3) Turn ignition key clockwise to crank (do not depress accelerator pedal), release key as soon as engine starts 4) If engine fails to start within 15 seconds, turn ignition key to the OFF position, wait 10 seconds, then restart
Transmission Shift Schedules, Mode	Transmission	A8	A7
	1st to 2nd	N/A	N/A
	2nd to 3rd	N/A	N/A
	3rd to 4th	N/A	N/A
	4th to 5th	N/A	N/A
	5th to 6th	N/A	N/A
	6th to 7th	N/A	N/A
	7th to 8th	N/A	N/A
	SS II.D.	FTP – FTA; HWFE - HWA	FTP – FTA; HWFE - HWA
	Transmission Mode	Auto Mode: operate in "D" and auto mode only. Do not shift manually	Auto Mode: operate in "D" and auto mode only. Do not shift manually
Selectable modes	Start-stop	Leave in default mode -- indicator on center console should not be illuminated	Leave in default mode -- indicator on center console should not be illuminated
	Other (Sport, Wet, etc.)	Leave all selectable mode buttons in default	Leave all selectable mode buttons in default
Other	Cooling fan	One road-speed fan, centered upright, front of vehicle	One road-speed fan, centered upright, front of vehicle
	Body apertures	Leave hood closed	Leave hood closed
	Test lab considerations	Porsche can supply instructions separately for E-Brake, Dyno Mode, Soak Area, and Canister loading	Porsche can supply instructions separately for E-Brake, Dyno Mode, Soak Area, and Canister loading

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Section 6~Test Vehicle Description

6.03>> Dynamometer Parameters

Carline	Trans	ETW [lbf]	Single Roll Coefficients (target)		
			A [lbf]	B [lbf/mph]	C [lbf/mph ²]
Cayenne S	A8	5250	55.078	0.71635	0.02020
Cayenne	A8	5000	49.458	0.71635	0.01991
Macan	A7	4500	58.001	0.31114	0.02399

Carline	Trans	ETW [lbf]	Single Roll Coefficients (set)		
			A [lbf]	B [lbf/mph]	C [lbf/mph ²]
Cayenne S	A8	5250	28.416	0.59334	0.02463
Cayenne	A8	5000	-1.978	0.50362	0.02009
Macan	A7	4500	58.001	0.31114	0.02399

Note: empty cells are intentional.

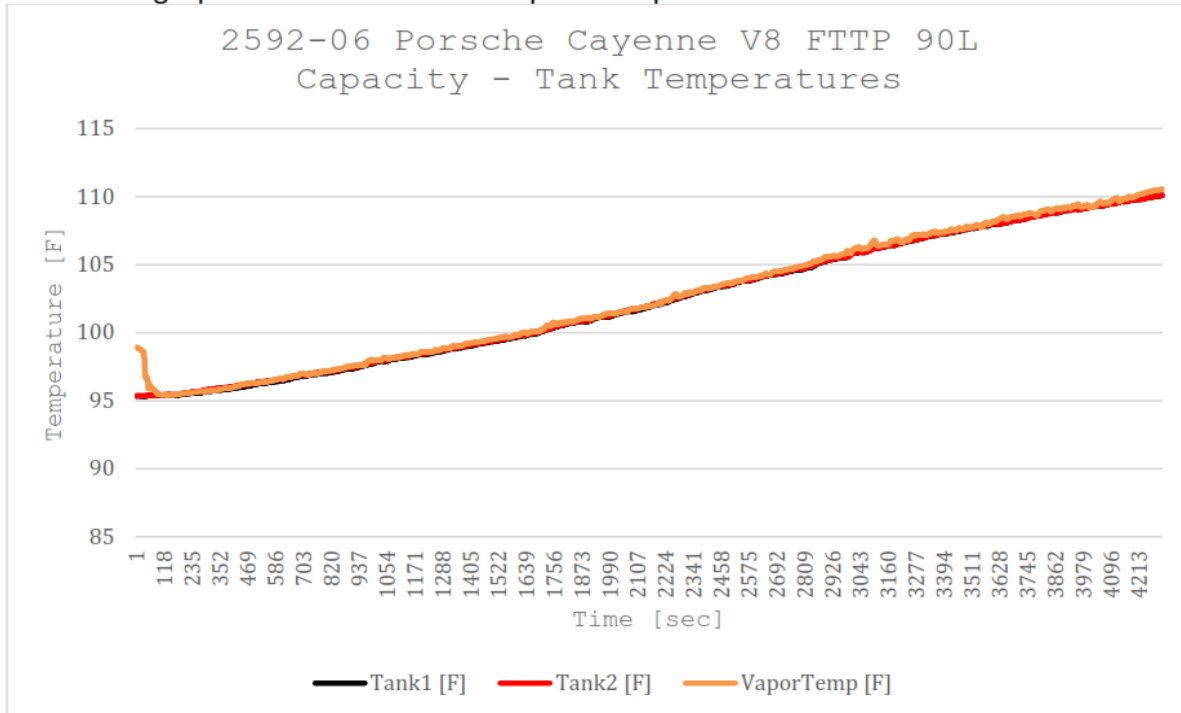
Section 6~Test Vehicle Description

6.05>> FFTP Summary

Carlines	Cayenne Series, Macan Series	
Evaporative Testing Parameters	Canister Loading	Canister Working Capacity = 150g
	FFTP REPORT ID *	150RED-2592-06

PRIMARY TEST RESULTS

The graph below shows the temperature profile for the duration of the test.



* Full report is available for review

Section 7~Test Results

7.01>> Exhaust / Evaporative Standards

Exhaust Standards: Federal: T3B70 California: LEULEV70

Test Cycle	Constituent	Certification Standard		High Altitude	In-Use Standard (g/mi)	
		(g/mi)		(g/mi)		
		Federal	California		Federal	California
FTP	NMOG+NOx	0.070	0.070	0.105	0.098	0.070
	CO	1.7	1.7	1.7	1.7	1.7
	HCHO	0.004	0.004	0.004	0.004	0.004
	PM	0.003	0.003	0.006	0.006	0.006
	CH4	0.030	0.030	0.030	0.030	0.030
	N2O	0.010	0.010	0.010	0.010	0.010
HFET	NMOG+NOx	0.070	0.070	0.105	0.098	0.070
SFTP	Composite NMOG+NOx	0.080	0.080	0.080	n/a	n/a
	Composite CO	4.2	4.2	4.2	n/a	n/a
	Declining NMOG+NOx	0.077	0.077	n/a	0.077	0.077
US06	PM	0.006	0.006	0.010	0.010	0.010
Cold CO	CO	12.5	12.5	n/a	12.5	12.5
	NMHC	0.3	0.3	n/a	0.3	0.3
50 Deg F <i>see note</i>	NMOG+NOx	--	0.140	--	--	--
	CO		2.1			
	HCHO	--	0.016	--	--	--

Note: 50 F test standards Not Applicable; tests not conducted on this test group

MPRXR0150REE Federal: Tier 3 California: LEV III

Test Cycle	Constituent	Certification Standard		High Altitude	In-Use Standard	
		Federal	California		Federal	California
2-Day	HC-EQUIV (g/test)	0.450	0.450	1.15	0.450	0.450
3-Day	HC-EQUIV (g/test)	0.450	0.450	1.15	0.450	0.450
Running Loss	HC-EQUIV (g/mi)	0.05	0.05	0.05	0.05	0.05
ORVR	HC-EQUIV (g/gal)	0.20	0.20	0.20	0.20	0.20
BETP	HC-EQUIV (g/test)	0.020	0.020	n/a	n/a	n/a

MPRXR0140RMA Federal: Tier 2 California: LEV II

Test Cycle	Constituent	Certification Standard		High Altitude	In-Use Standard	
		Federal	California		Federal	California
2-Day	HC-EQUIV (g/test)	0.85	0.85	0.85	0.85	0.85
3-Day	HC-EQUIV (g/test)	0.65	0.65	0.85	0.65	0.65
Running Loss	HC-EQUIV (g/mi)	0.05	0.05	0.05	0.05	0.05
ORVR	HC-EQUIV (g/gal)	0.20	0.20	0.20	0.20	0.20
BETP	HC-EQUIV (g/test)	0.02	0.02	n/a	n/a	n/a

Section 7-Test Results

7.02>> GHG Compliance Statements / Certification Tests

GHG in-use standards: Please refer to the VW Group's final GHG Report for this Model Year.

Start-Stop: For all Cayenne models in this test group, the Auto Start-Stop system defaults to ON. Therefore, in-use tests should be conducted in the Default mode, and no weighting of test data is required for demonstrating compliance with in-use GHG standards. For all Macan models, the Auto Start-Stop system defaults to Last Mode ("latching" system). Therefore, Macan Start-Stop active-inactive data must be weighed 50/50 when demonstrating compliance with in-use GHG standards.

N₂O and CH₄: Please see attestations of GHG fleet averaging in Section 8.02. Porsche has elected to comply with N₂O and CH₄ standards for all test groups of the following model year:

2021

Certification Tests:

Exhaust Data:

<u>Test Number</u>	<u>Test Type</u>
KPRX10054031	FTP
KPRX10054032	HFET
KPRX10054033	US06
KPRX10054035	SC03
KPRX10054034	Cold CO
N/A	50 Deg. F

Evaporative Data:

<u>Test Number</u>	<u>Test Type</u>
KPRX91004097	2-Day Evap (EPA test)
KPRX10054422	3-Day Evap
KPRX10054427	Running Loss
KPRX10054428	ORVR
KPRX10054425	BETP

MPRXR0150REE

Certification Tests Used for N₂O and CH₄:

KPRX10054201	FTP
KPRX10054203	Highway

Evaporative Data:

<u>Test Number</u>	<u>Test Type</u>
KPRX10057792	2-Day Evap
KPRX10057790	3-Day Evap
KPRX10057795	Running Loss
KPRX10057794	ORVR
N/A	BETP

MPRXR0140RMA

Section 7-Test Results

7.03>> CSI Report

The Certification Summary Information (CSI) report begins on the following page.

Certification Summary Information Report

Manufacturer	Porsche AG	Manufacturer Code	PRX
Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0150REE
Certificate Number	--	CARB Executive Order #	--
Certificate Issue Date	--	Certificate Revision Date	--
Certificate Effective Date	--	Conditional Certificate	--
CSI Revision #	--	CSI Submission/Revision Date	10/07/2020 10:41:37 AM
Model Year	2021		

Test Group Information

CSI Type	Update for Correction	Running Change Reference Number	--
GHG Exempt Status	Not Exempt		

Drive Sources and Fuel(s)

Drive Source #1: Combustion Engine

Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator
Gasoline	Spark Ignition Direct fuel injection	No

Hybrid Indicator	No		
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	--
Multiple Fuel Combustion	--	Off-board Charge Capable Indicator	--
Fuel Cell Indicator	--	EPA Vehicle Class	LDT2, LDT3
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	MPRXGPGNNCT6	Durability Group Equivalency Factor	1
Reduced Fee Test Group	No	Certification Region Code(s)	FA, CA
Complies with HD GHG 2b/3 regulations?	No		
Introduction into Commerce Date	10/14/2020	CAP2000 Conditional Certificate?	N/A
Independent Commercial Importer?	--	Alternative Fuel Converter Certificate?	--
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	MPRXV03.0PV6
Test Group OBD Compliance Level	Partial - with deficiencies and penalty	Number of Test Group OBD Deficiencies	3
OBD Deficiencies Comments	OBD approval E-120-156; engine stop-start, evaporative system, and comprehensive component; fine for CCM deficiency		
Mfr Test Group Comments	Cayenne, Cayenne S, Cayenne Coupe, Cayenne Coupe S, Macan S, Macan Turbo, Macan GTS; all carryover data; Auto mode; No downshifts; No sport button usage. User-selectable transmission includes Drive, Sport, and Sport Plus modes. EDV testing performed in Drive mode.		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0150REE				
Evaporative/Refueling Family Information							
Evaporative Summary Information Type	New	Submission/Correction Date	07/30/2020 11:28:25 AM				
Integrated ORVR?	Yes	Fuel(s)	Gasoline				
Multiple Fuel Storage	--						
Bladder Fuel Tank?	No						
Fuel Tank Material	Plastic	Fuel Tank Material Description	Plastic				
Fill Pipe Seal Type	Liquid seal						
Air Intake System Vapor Storage Device?	No	Air Intake System Vapor Storage Device Description	--				
Fuel System Vapor Storage Canister?	Yes	Other Vapor Storage	--				
Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)	150	Number of Primary Canisters	1				
Number of Bleed Canisters	0	Bleed Canister Total Working Capacity (grams)	--				
Mfr Evaporative/Refueling Family Comments	Evap system for E3 (Cayenne, all non-hybrid models)						
Leak Family Details							
Leak Family Indicator	No						
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	--						
Models Covered by this Certificate							
Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - Type	- # of Gears	Trans - Lockup
Porsche AG	1 - Porsche	413 - Cayenne S Coupé	California + CAA Section 177 states	All Wheel Drive	Semi-Automatic	8	Yes
Porsche AG	1 - Porsche	411 - Cayenne S	California + CAA Section 177 states	All Wheel Drive	Semi-Automatic	8	Yes
Porsche AG	1 - Porsche	401 - Cayenne	Federal	All Wheel Drive	Semi-Automatic	8	Yes
Porsche AG	1 - Porsche	403 - Cayenne Coupé	California + CAA Section 177 states	All Wheel Drive	Semi-Automatic	8	Yes
Porsche AG	1 - Porsche	401 - Cayenne	California + CAA Section 177 states	All Wheel Drive	Semi-Automatic	8	Yes
Porsche AG	1 - Porsche	403 - Cayenne Coupé	Federal	All Wheel Drive	Semi-Automatic	8	Yes
Porsche AG	1 - Porsche	413 - Cayenne S Coupé	Federal	All Wheel Drive	Semi-Automatic	8	Yes
Porsche AG	1 - Porsche	411 - Cayenne S	Federal	All Wheel Drive	Semi-Automatic	8	Yes

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0150REE	
Engine Description				
Hybrid Type	--	Hybrid Description	--	
Engine Type	4-Stroke Spark Ignition	Mfr Engine Description	--	
Engine Block Arrangement	V-shaped engine	Mfr Engine Block Arrangement Description	--	
Camless Valvetrain Indicator	No	Oil Viscosity/Classification	0W40	
Number of Cylinders/Rotors	6	Mechanically Variable Compression Ratio Indicator	N	
After Treatment Device(s) (ATD)				
ATD Number	ATD Type	ATD Precious Metal	Substrate Material	Substrate Construction
1	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
2	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
Mfr After Treatment Device (ATD) Comments	Aftertreatment device section above describes all pre- and main catalysts; Cayenne, Cayenne Coupe, and Macan S 3.0L have only one set, in a single exhaust system; Cayenne S, Cayenne S Coupe, Macan Turbo and Macan GTS 2.9L have two sets, in a dual exhaust system; systems differ in catalyst loading, catalyst volume, and precious metal loading			
Direct Ozone Reduction (DOR) Device	Not Equipped			
Mfr Emission Control Device Comments	2TWC(2), 2HO2S(2), SFI (2WU-TWC/2TWC/MAP/DFI/2WR-HO2S/2HO2S/2TC/2CAC) (WU-TWC/MAP/DFI/WR-HO2S/HO2S/1TC/2CAC)			
Engine Configuration Number 1				
Engine Displacement (liters)	2.9	Engine Rated Horsepower	434	
Number of Inlet Valves Per Cylinder	2	Number of Exhaust Valves Per Cylinder	2	
Air Aspiration Method	Turbocharged	Number of Air Aspiration Devices	2	
Air Aspiration Device Configuration	Parallel	Charge Air Cooler Type	Air	
Air Aspiration Drive Method(s)	Mechanical			
Cylinder Deactivation	No			
Cylinder Deactivation Description	--			
Variable Valve Timing	Yes			
Variable Valve Timing System Description	VarioCam Plus			
Variable Valve Lift?	Yes			
Variable Valve Lift System Description	VarioCam Plus			
Number of Knock Sensors	1	Number of Air/Fuel Sensors	4	
Air/Fuel Sensor # 1 Type	Heated oxygen	Air/Fuel Sensor # 1 Description	--	
Air/Fuel Sensor # 2 Type	Heated oxygen	Air/Fuel Sensor # 2 Description	--	
Air/Fuel Sensor # 3 Type	Heated oxygen	Air/Fuel Sensor # 3 Description	--	
Air/Fuel Sensor # 4 Type	Heated oxygen	Air/Fuel Sensor # 4 Description	--	
Mfr Air/Fuel Sensor Comments	--			
Exhaust Gas Recirculation	No	Cooled Exhaust Gas Recirculation	--	
EGR Type	--	Exhaust Gas Recirculation Description if 'Other'	--	
Closed Loop Air Injection System	--			
Air Injection Type	--	Air Injection Type if 'Other'	--	
Mfr Engine Configuration Comments	engine for Cayenne S and Cayenne S Coupe and Macan Turbo 2WU-TWC/2TWC/MAP/DFI/2WR-HO2S/2HO2S/2TC/2CAC			

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0150REE
Engine Configuration Number 2			
Engine Displacement (liters)	3.0	Engine Rated Horsepower	335
Number of Inlet Valves Per Cylinder	2	Number of Exhaust Valves Per Cylinder	2
Air Aspiration Method	Turbocharged	Number of Air Aspiration Devices	1
Air Aspiration Device Configuration	Single	Charge Air Cooler Type	Air
Air Aspiration Drive Method(s)	Mechanical		
Cylinder Deactivation	No		
Cylinder Deactivation Description	--		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	VarioCam Plus		
Variable Valve Lift?	Yes		
Variable Valve Lift System Description	VarioCam Plus		
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	Heated oxygen	Air/Fuel Sensor # 2 Description	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	Cooled Exhaust Gas Recirculation	No
EGR Type	--	Exhaust Gas Recirculation Description if 'Other'	--
Closed Loop Air Injection System	No		
Air Injection Type	--	Air Injection Type if 'Other'	--
Mfr Engine Configuration Comments	engine for Cayenne and Cayenne Coupe WU-TWC/MAP/DFI/WR-HO2S/HO2S/1TC/2CAC		

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXXR0150REE
Engine Configuration Number 3			
Engine Displacement (liters)	3.0	Engine Rated Horsepower	348
Number of Inlet Valves Per Cylinder	2	Number of Exhaust Valves Per Cylinder	2
Air Aspiration Method	Turbocharged	Number of Air Aspiration Devices	1
Air Aspiration Device Configuration	Single	Charge Air Cooler Type	Air
Air Aspiration Drive Method(s)	Mechanical		
Cylinder Deactivation	No		
Cylinder Deactivation Description	--		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	VarioCam Plus		
Variable Valve Lift?	Yes		
Variable Valve Lift System Description	VarioCam Plus		
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	Heated oxygen	Air/Fuel Sensor # 2 Description	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	Cooled Exhaust Gas Recirculation	No
EGR Type	--	Exhaust Gas Recirculation Description if 'Other'	--
Closed Loop Air Injection System	No		
Air Injection Type	--	Air Injection Type if 'Other'	--
Mfr Engine Configuration Comments	Engine for Macan S WU-TWC//MAP/DFI/WR-HO2S/HO2S/TC/2CAC		

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXXR0150REE								
Engine Configuration Number 4											
Engine Displacement (liters)	2.9	Engine Rated Horsepower	375								
Number of Inlet Valves Per Cylinder	2	Number of Exhaust Valves Per Cylinder	2								
Air Aspiration Method	Turbocharged	Number of Air Aspiration Devices	2								
Air Aspiration Device Configuration	Parallel	Charge Air Cooler Type	Air								
Air Aspiration Drive Method(s)	Mechanical										
Cylinder Deactivation	No										
Cylinder Deactivation Description	--										
Variable Valve Timing	Yes										
Variable Valve Timing System Description	VarioCam Plus										
Variable Valve Lift?	Yes										
Variable Valve Lift System Description	VarioCam Plus										
Number of Knock Sensors	1	Number of Air/Fuel Sensors	4								
Air/Fuel Sensor # 1 Type	Heated oxygen	Air/Fuel Sensor # 1 Description	--								
Air/Fuel Sensor # 2 Type	Heated oxygen	Air/Fuel Sensor # 2 Description	--								
Air/Fuel Sensor # 3 Type	Heated oxygen	Air/Fuel Sensor # 3 Description	--								
Air/Fuel Sensor # 4 Type	Heated oxygen	Air/Fuel Sensor # 4 Description	--								
Mfr Air/Fuel Sensor Comments	--										
Exhaust Gas Recirculation	No	Cooled Exhaust Gas Recirculation	No								
EGR Type	--	Exhaust Gas Recirculation Description if 'Other'	--								
Closed Loop Air Injection System	No										
Air Injection Type	--	Air Injection Type if 'Other'	--								
Mfr Engine Configuration Comments	engine for Macan GTS 2WU-TWC/2TWC/MAP/DFI/2WR-HO2S/2HO2S/2TC/2CAC										
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	KPRX10054031	KPRX10054033	KPRX10054035	KPRX10054034	KPRX10054032	20.9	228.2	29.1	286.1	--	
SFTP LEV-III Official Test Numbers											
Test Group	Fuel	FTP	US06	SC03							
Gasoline	KPRX10054031	KPRX10054033	KPRX10054035	KPRX10054035							

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0150REE					
Emission Data Vehicle Information								
Vehicle ID / Configuration	EC-9YA-19 / 0	Manufacturer Vehicle Configuration Number	0					
Original Test Group Name	KPRXT03.0CV6	Original Evaporative/Refueling Family	KPRXR0150RED					
Original Test Vehicle Model Year	2019							
Vehicle Model								
Represented Test Vehicle Make	Porsche	Represented Test Vehicle Model	Cayenne					
Leak Family Details								
Leak Family Identifier	--	Leak Family Name	--					
Drive Sources and Fuel System Details								
	<table border="1"> <thead> <tr> <th>Drive Source and Fuel#</th> <th>Drive Source</th> <th>Fuel</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Combustion Engine</td> <td>Gasoline</td> </tr> </tbody> </table>	Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	Gasoline	
Drive Source and Fuel#	Drive Source	Fuel						
1	Combustion Engine	Gasoline						
Hybrid Indicator	No							
Multiple Fuel Storage	--	Multiple Fuel Combustion	--					
Fuel Cell Indicator	--	Rechargeable Energy Storage System Indicator	--					
Rechargeable Energy Storage System	--	Rechargeable Energy Storage System, if 'Other'	--					
Off-board charge Capable Indicator	--							
Odometer Correction -- Initial	0	Odometer Correction Factor	0.9982					
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles							
Odometer Correction Units	Miles							
Engine Code	DCB	Rated Horsepower	332					
Displacement (liters)	3							
Air Aspiration Method	Turbocharged	Air Aspiration Method, if 'Other'						
Number of Air Aspiration Devices	1	Air Aspiration Device Configuration	Single					
Charge Air Cooler Type	Air	Drive Mode While Testing	2-Wheel Drive, Rear					
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)					
Curb Weight (lbs)	4696	Equivalent Test Weight (pounds)	5000					
GVWR (lbs)	6239	N/V Ratio	48.8					
Axle Ratio	3.21							
Transmission Type	Semi-Automatic	# of Transmission Gears	8					
Transmission Lockup	Yes	Creep Gear	No					

Certification Summary Information Report

Test Group		MPRXT03.0CV6			Evaporative/Refueling Family		MPRXR0150REE	
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	49.458	0.71636	0.01991	49.458	0.71636	0.01991	18	
Cold CO	49.458	0.71636	0.01991	49.458	0.71636	0.01991	N/A	
US06	49.458	0.71636	0.01991	49.458	0.71636	0.01991	N/A	
Emission Control Device Comments		--						
Manufacturer Test Vehicle Comments		Evap test vehicle for base Cayenne, Cayenne S, and Cayenne Turbo						

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0150REE
Test #	KPRX10054420	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	06/08/2018	Fuel	Gasoline
Fuel Batch ID	EK1603	Fuel Calibration Number	6
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Determined
Verify Test Lab ID	MZU Weissach		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4431	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)	
CO2 BAG 1 (Bag 1 Carbon Dioxide)	417.5	--	
FE BAG 1 (Bag 1 Fuel Economy)	21.07	21.07	
CO2 BAG 2 (Bag 2 Carbon Dioxide)	377.02	--	
FE BAG 2 (Bag 2 Fuel Economy)	23.39	23.39	
CO2 BAG 3 (Bag 3 Carbon Dioxide)	358.13	--	
FE BAG 3 (Bag 3 Fuel Economy)	24.6	24.6	
METHANE (CH4 - Methane)	0.0022	--	
CO (Carbon Monoxide)	0.3	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	2.1901	--	
DT-EER (Drive Trace Energy Economy Rating)	1.0065	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	2.86	--	
HCHO (Formaldehyde)	0.0001	--	
MFR FE (Manufacturer Fuel Economy)	23.17	23.17	
NOX (Nitrogen Oxide)	0.01705	--	
HC-NM (Non-methane Hydrocarbon)	0.0133	--	
NMOG (Non-methane organic gases)	0.01459	--	
HC-TOTAL (Total Hydrocarbon)	0.01543	--	
Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE	
Carbon-Related Exhaust Emissions	381	999	

Certification Summary Information Report

Test Group		MPRXT03.0CV6			Evaporative/Refueling Family				MPRXR0150REE			
		Test Result Name		Unrounded Test Result		Verify Calculated CO2						
		Carbon dioxide		380.23		--						
Manufacturer Test Comments		New Cayenne ("E3" platform), FTP for evap tests; E10, Porsche Test #1818797										
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	METHANE	0.0022	--	--	--	0.0034	--	0.006	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	CO	0.30	--	--	--	0.26	--	0.6	1.7	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	CREE	999	--	--	--	0.43	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 70	HCHO	0.0001	--	--	--	0.0000	--	0.000	0.004	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG	0.0146	--	1.10	--	0.0082	--	0.023	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.0316	--	1.10	--	--	--	0.056	0.070	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.0170	--	--	--	0.0160	--	0.033	999.999	Pass
CA	120,000 miles	California LEV-III ULEV70	METHANE	0.0022	--	--	--	0.0034	--	0.006	0.030	Pass
CA	150,000 miles	California LEV-III ULEV70	CO	0.30	--	--	--	0.26	--	0.6	1.7	Pass
CA	150,000 miles	California LEV-III ULEV70	HCHO	0.0001	--	--	--	0.0000	--	0.000	.004	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0146	--	1.10	--	0.0082	--	0.023	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0316	--	1.10	--	--	--	0.056	0.070	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0170	--	--	--	0.0160	--	0.033	999.999	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	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0150REE
Test #	KPRX91004096	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	10/24/2018	Fuel	Gasoline
Fuel Batch ID	26596	Fuel Calibration Number	2
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4641	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)	
CO2 BAG 1 (Bag 1 Carbon Dioxide)	414.1291082	--	
FE BAG 1 (Bag 1 Fuel Economy)	999	--	
CO2 BAG 2 (Bag 2 Carbon Dioxide)	387.7855861	--	
FE BAG 2 (Bag 2 Fuel Economy)	999	--	
CO2 BAG 3 (Bag 3 Carbon Dioxide)	370.8945705	--	
FE BAG 3 (Bag 3 Fuel Economy)	999	--	
METHANE (CH4 - Methane)	0.0036511	--	
CO (Carbon Monoxide)	0.285183	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	2.060133	--	
DT-EER (Drive Trace Energy Economy Rating)	0.954863	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	2.986753	--	
MFR FE (Manufacturer Fuel Economy)	999	--	
NOX (Nitrogen Oxide)	0.014333	--	
HC-NM (Non-methane Hydrocarbon)	0.0175624	--	
NMOG (Non-methane organic gases)	0.019326	--	
HC-TOTAL (Total Hydrocarbon)	0.0206742	--	
Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE	
Carbon-Related Exhaust Emissions	0	999	

Certification Summary Information Report

Test Group		MPRXT03.0CV6			Evaporative/Refueling Family				MPRXR0150REE			
		Test Result Name		Unrounded Test Result			Verify Calculated CO2					
		Carbon dioxide		388.6038907			--					
Manufacturer Test Comments		NMOG=1.100 x NMHC TC N2O Not Measured. OPT-CREE not determined. CREE calculated. Unrounded Result for the following test results were modified by Verify: FE BAG 2, FE BAG 1, MFR FE, FE BAG 3										
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	METHANE	0.0037	--	--	--	0.0034	--	0.007	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	CO	0.29	--	--	--	0.26	--	0.6	1.7	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	CREE	999	--	--	--	0.43	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG	0.0193	--	1.10	--	0.0082	--	0.028	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.0336	--	1.10	--	--	--	0.058	0.070	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.0143	--	--	--	0.0160	--	0.030	999.999	Pass
CA	120,000 miles	California LEV-III ULEV70	METHANE	0.0037	--	--	--	0.0034	--	0.007	0.030	Pass
CA	150,000 miles	California LEV-III ULEV70	CO	0.29	--	--	--	0.26	--	0.6	1.7	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0193	--	1.10	--	0.0082	--	0.028	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0336	--	1.10	--	--	--	0.058	0.070	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0143	--	--	--	0.0160	--	0.030	999.999	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	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0150REE
Test #	KPRX10054422	Test Procedure	34 - Federal fuel 3-day evap
Exhaust Test # for this Evap Test	KPRX10054420	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	05/13/2018	Fuel	Gasoline
Fuel Batch ID	EK1603	Fuel Calibration Number	6
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	MZU Weissach		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	4282	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)	0.3559	--

Manufacturer Test Comments

new E3 (all non-hybrid Cayenne models) evap system; Porsche test number 1814412

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.3559	0.0140	0.370	0.450	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.3559	0.0140	0.370	0.450	Pass

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0150REE
Test #	KPRX91004097	Test Procedure	23 - 2-day evap
Exhaust Test # for this Evap Test	KPRX91004096	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	10/24/2018	Fuel	Gasoline
Fuel Batch ID	26596	Fuel Calibration Number	2
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	4652	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)	0.222484	--

Manufacturer Test Comments

Hot_Soak_HC_(g) = 0.038368, Diurnal (gHC) = 0.184116

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.2225	0.0108	0.233	0.450	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.2225	0.0108	0.233	0.450	Pass

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0150REE
Test #	KPRX10054427	Test Procedure	32 - Federal Fuel Running Loss
Exhaust Test # for this Evap Test	KPRX10054420	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	05/19/2018	Fuel	Gasoline
Fuel Batch ID	EK1603	Fuel Calibration Number	6
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	MZU Weissach		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	4268	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	--

Manufacturer Test Comments

new "E3" (all non-hybrid Cayenne models); E10 fuel; Porsche test number 1814943

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.000	0.000	0.00	0.05	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.000	0.000	0.00	0.05	Pass

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0150REE						
Test #	KPRX10054428	Test Procedure	24 - Federal fuel refueling test (ORVR)						
Exhaust Test # for this Evap Test	KPRX10054426	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)						
Test Date	05/30/2018	Fuel	N/A						
Fuel Batch ID	CAFW17	Fuel Calibration Number	745						
Vehicle Class	N/A	DF Type	Mfr. Determined						
Verify Test Lab ID	Volkswagen AG								
E10 Evaporative Test Measurement Method	--								
Test Start Odometer Reading	4293	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"> <thead> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated FE Equivalent Value (miles per gallon)</th> </tr> </thead> <tbody> <tr> <td>HC (Hydrocarbon for Running Loss and ORVR)</td> <td>0.036</td> <td>--</td> </tr> </tbody> </table>				Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	HC (Hydrocarbon for Running Loss and ORVR)	0.036	--
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)							
HC (Hydrocarbon for Running Loss and ORVR)	0.036	--							
Manufacturer Test Comments	new "E3" (all non-hybrid Cayenne models); E10 fuel; Porsche test number ORVR-264-18								

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0150REE
Test #	KPRX10054425	Test Procedure	65 - Evap Canister Bleed Test
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	05/26/2018	Fuel	Gasoline
Fuel Batch ID	CAFW17	Fuel Calibration Number	745
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	Volkswagen AG		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	4303	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)	0.009	--

Manufacturer Test Comments new "E3" (all non-hybrid Cayenne models); E10 fuel; Porsche test number E48-255-18 (VW Wolfsburg)

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.0090	0.0000	0.009	0.020	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.0090	0.0000	0.009	0.020	Pass

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0150REE					
Emission Data Vehicle Information								
Vehicle ID / Configuration	ECFE-9YAS-19 / 0	Manufacturer Vehicle Configuration Number	0					
Original Test Group Name	KPRXT03.0CV6	Original Evaporative/Refueling Family	KPRXR0150RED					
Original Test Vehicle Model Year	2019							
Vehicle Model								
Represented Test Vehicle Make	Porsche	Represented Test Vehicle Model	Cayenne S					
Leak Family Details								
Leak Family Identifier	--	Leak Family Name	--					
Drive Sources and Fuel System Details								
	<table border="1"> <thead> <tr> <th>Drive Source and Fuel#</th> <th>Drive Source</th> <th>Fuel</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Combustion Engine</td> <td>Gasoline</td> </tr> </tbody> </table>	Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	Gasoline	
Drive Source and Fuel#	Drive Source	Fuel						
1	Combustion Engine	Gasoline						
Hybrid Indicator	No							
Multiple Fuel Storage	--	Multiple Fuel Combustion	--					
Fuel Cell Indicator	--	Rechargeable Energy Storage System Indicator	--					
Rechargeable Energy Storage System	--	Rechargeable Energy Storage System, if 'Other'	--					
Off-board charge Capable Indicator	--							
Odometer Correction -- Initial	0	Odometer Correction Factor	0.9867					
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles							
Odometer Correction Units	Miles							
Engine Code	DCA	Rated Horsepower	434					
Displacement (liters)	2.9							
Air Aspiration Method	Turbocharged	Air Aspiration Method, if 'Other'						
Number of Air Aspiration Devices	2	Air Aspiration Device Configuration	Parallel					
Charge Air Cooler Type	Air	Drive Mode While Testing	2-Wheel Drive, Rear					
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)					
Curb Weight (lbs)	4892	Equivalent Test Weight (pounds)	5250					
GVWR (lbs)	6261	N/V Ratio	48.8					
Axle Ratio	3.21							
Transmission Type	Semi-Automatic	# of Transmission Gears	8					
Transmission Lockup	Yes	Creep Gear	No					

Certification Summary Information Report

Test Group		MPRXT03.0CV6			Evaporative/Refueling Family		MPRXR0150REE	
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	55.078	0.71635	0.0202	55.078	0.71635	0.0202	18.9	
Cold CO	55.078	0.71635	0.0202	55.078	0.71635	0.0202	N/A	
US06	55.078	0.71635	0.0202	55.078	0.71635	0.0202	N/A	
Emission Control Device Comments		2WU-TWC/MAP/DFI/2WR-HO2S/2HO2S/2TC/2CAC						
Manufacturer Test Vehicle Comments		Test Vehicle for Fuel Economy and Emissions; Cayenne S model; Porsche internal test vehicle number SEP654; 2nd correction: add decimal place to axle ratio; Auto mode; No downshifts; No sport button usage. User-selectable transmission includes Drive, Sport, and Sport Plus modes. EDV testing performed in Drive mode.						

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0150REE
Test #	KPRX10054031	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	02/02/2018	Fuel	Gasoline
Fuel Batch ID	EK1603	Fuel Calibration Number	6
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Determined
Verify Test Lab ID	MZU Weissach		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4355	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)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	411.63	--
FE BAG 1 (Bag 1 Fuel Economy)	21.39	21.39
CO2 BAG 2 (Bag 2 Carbon Dioxide)	388.28	--
FE BAG 2 (Bag 2 Fuel Economy)	22.72	22.72
CO2 BAG 3 (Bag 3 Carbon Dioxide)	361.97	--
FE BAG 3 (Bag 3 Fuel Economy)	24.35	24.35
METHANE (CH4 - Methane)	0.002	--
CO (Carbon Monoxide)	0.15148	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.876	--
DT-EER (Drive Trace Energy Economy Rating)	0.15	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.9343	--
HCHO (Formaldehyde)	0.0001	--
MFR FE (Manufacturer Fuel Economy)	22.85	22.85
NOX (Nitrogen Oxide)	0.01986	--
HC-NM (Non-methane Hydrocarbon)	0.01482	--
NMOG (Non-methane organic gases)	0.01627	--
PM (Particulate Matter)	0.00075	--
HC-TOTAL (Total Hydrocarbon)	0.0171	--

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0150REE
	Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
	Carbon-Related Exhaust Emissions	386	999
	Test Result Name	Unrounded Test Result	Verify Calculated CO2
	Carbon dioxide	385.9	--
Manufacturer Test Comments	New Cayenne and Cayenne S ("E3" platform); FTP, E10, Porsche Test #1805389; correction to add PM		

Certification Summary Information Report

Test Group		MPRXT03.0CV6				Evaporative/Refueling Family				MPRXR0150REE		
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	METHANE	0.0020	--	--	--	0.0034	--	0.005	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	CO	0.15	--	--	--	0.26	--	0.4	1.7	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	CO-COMP	0.57	--	--	--	0.26	--	0.6	4.2	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	CREE	999	--	--	--	0.43	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 70	HCHO	0.0001	--	--	--	0.0000	--	0.000	0.004	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG	0.0163	--	1.10	--	0.0082	--	0.024	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.0362	--	1.10	--	--	--	0.060	0.070	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX-COMP	0.0465	--	1.10	--	0.0242	--	0.046	0.080	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.0199	--	--	--	0.0160	--	0.036	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	PM	0.0008	--	--	--	0.0000	--	0.001	0.003	Pass
CA	120,000 miles	California LEV-III ULEV70	METHANE	0.0020	--	--	--	0.0034	--	0.005	0.030	Pass
CA	150,000 miles	California LEV-III ULEV70	CO	0.15	--	--	--	0.26	--	0.4	1.7	Pass
CA	150,000 miles	California LEV-III ULEV70	CO-COMP	0.57	--	--	--	0.26	--	0.6	4.2	Pass
CA	150,000 miles	California LEV-III ULEV70	HCHO	0.0001	--	--	--	0.0000	--	0.000	.004	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0163	--	1.10	--	0.0082	--	0.024	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0362	--	1.10	--	--	--	0.060	0.070	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX-COMP	0.0465	--	1.10	--	0.0242	--	0.046	0.080	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0199	--	--	--	0.0160	--	0.036	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	PM	0.0008	--	--	--	0.0000	--	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	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0150REE
Test #	KPRX10054034	Test Procedure	11 - Cold CO
Exhaust Test # for this Evap Test	--	Test Fuel Type	29 - Cold CO E10 Premium Gasoline (Tier 3)
Test Date	03/06/2018	Fuel	Gasoline
Fuel Batch ID	FH0303	Fuel Calibration Number	10
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Determined
Verify Test Lab ID	MZU Weissach		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4481	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)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	553.08	--
FE BAG 1 (Bag 1 Fuel Economy)	15.71	15.71
CO2 BAG 2 (Bag 2 Carbon Dioxide)	456.95	--
FE BAG 2 (Bag 2 Fuel Economy)	19.12	19.12
CO2 BAG 3 (Bag 3 Carbon Dioxide)	396.22	--
FE BAG 3 (Bag 3 Fuel Economy)	22.03	22.03
METHANE (CH4 - Methane)	0.0089	--
CO (Carbon Monoxide)	0.36231	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.335	--
DT-EER (Drive Trace Energy Economy Rating)	0.8407	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.888	--
HCHO (Formaldehyde)	0.0006	--
MFR FE (Manufacturer Fuel Economy)	18.96	18.96
NOX (Nitrogen Oxide)	0.01654	--
N2O (Nitrous Oxide)	0.00046	--
HC-NM (Non-methane Hydrocarbon)	0.06017	--
NMOG (Non-methane organic gases)	0.0663	--
PM (Particulate Matter)	0.00986	--
HC-TOTAL (Total Hydrocarbon)	0.06859	--

Certification Summary Information Report

Test Group		MPRXT03.0CV6				Evaporative/Refueling Family				MPRXR0150REE		
		Test Result Name		Unrounded Test Result		Verify Calculated CREE/OPT-CREE						
		Carbon-Related Exhaust Emissions		461		--						
		Test Result Name		Unrounded Test Result		Verify Calculated CO2						
		Carbon dioxide		460.19		--						
Manufacturer Test Comments		New Cayenne and Cayenne S ("E3" platform); Cold CO for certification; E10 Low T fuel; Porsche internal test vehicle name SEP654; Porsche Test Num 1806986										
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	0.36	--	--	--	0.26	--	0.6	12.5	Pass
Fed	120,000 miles	Federal Tier 3 Bin 70	HC-NM	0.06	--	--	--	0.01	--	0.1	0.3	Pass
CA	50,000 miles	California LEV-III ULEV70	CO	0.36	--	--	--	0.26	--	0.6	12.5	Pass
CA	120,000 miles	California LEV-III ULEV70	HC-NM	0.06	--	--	--	0.01	--	0.1	0.3	Pass

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0150REE
Test #	KPRX10054201	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	05/04/2018	Fuel	Gasoline
Fuel Batch ID	PUTG96	Fuel Calibration Number	456
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Determined
Verify Test Lab ID	MZU Weissach		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4619	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)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	416.59	--
FE BAG 1 (Bag 1 Fuel Economy)	21.1	21.1
CO2 BAG 2 (Bag 2 Carbon Dioxide)	383.83	--
FE BAG 2 (Bag 2 Fuel Economy)	23	23
CO2 BAG 3 (Bag 3 Carbon Dioxide)	368.64	--
FE BAG 3 (Bag 3 Fuel Economy)	23.93	23.93
METHANE (CH4 - Methane)	0.0036	--
CO (Carbon Monoxide)	0.25633	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.5954	--
DT-EER (Drive Trace Energy Economy Rating)	-1.3481	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.317	--
HCHO (Formaldehyde)	0.0002	--
MFR FE (Manufacturer Fuel Economy)	22.82	22.82
NOX (Nitrogen Oxide)	0.01815	--
N2O (Nitrous Oxide)	0.00061	--
HC-NM (Non-methane Hydrocarbon)	0.02326	--
NMOG (Non-methane organic gases)	0.02419	--
PM (Particulate Matter)	0.00082	--
HC-TOTAL (Total Hydrocarbon)	0.02665	--

Certification Summary Information Report

Test Group		MPRXT03.0CV6			Evaporative/Refueling Family				MPRXR0150REE			
		Test Result Name		Unrounded Test Result			Verify Calculated CREE/OPT-CREE					
		Carbon-Related Exhaust Emissions		387			386					
		Test Result Name		Unrounded Test Result			Verify Calculated CO2					
		Carbon dioxide		386.45			--					
Manufacturer Test Comments		New Cayenne S ("E3" platform), for Fuel Economy; FTP, E0, Porsche Test #1814157; correction to add N2O and PM results										
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	METHANE	0.0036	--	--	--	0.0034	--	0.007	0.030	Pass
Fed	120,000 miles	Federal Tier 3 Bin 70	N2O	0.0006	--	--	--	0.0010	--	0.002	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	CO	0.26	--	--	--	0.26	--	0.5	1.7	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	CREE	386	--	--	--	0.43	--	386	--	--
Fed	150,000 miles	Federal Tier 3 Bin 70	HCHO	0.0002	--	--	--	0.0000	--	0.000	0.004	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG	0.0242	--	1.10	--	0.0082	--	0.032	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.0424	--	1.10	--	--	--	0.067	0.070	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.0182	--	--	--	0.0160	--	0.034	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	PM	0.0008	--	--	--	0.0000	--	0.001	0.003	Pass
CA	120,000 miles	California LEV-III ULEV70	METHANE	0.0036	--	--	--	0.0034	--	0.007	0.030	Pass
CA	120,000 miles	California LEV-III ULEV70	N2O	0.0006	--	--	--	0.0010	--	0.002	0.010	Pass
CA	150,000 miles	California LEV-III ULEV70	CO	0.26	--	--	--	0.26	--	0.5	1.7	Pass
CA	150,000 miles	California LEV-III ULEV70	HCHO	0.0002	--	--	--	0.0000	--	0.000	.004	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0242	--	1.10	--	0.0082	--	0.032	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0424	--	1.10	--	--	--	0.067	0.070	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0182	--	--	--	0.0160	--	0.034	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	PM	0.0008	--	--	--	0.0000	--	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	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0150REE
Test #	KPRX10054032	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	02/02/2018	Fuel	Gasoline
Fuel Batch ID	EK1603	Fuel Calibration Number	6
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Determined
Verify Test Lab ID	MZU Weissach		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4366	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)
CO (Carbon Monoxide)	0.1019	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	2.762	--
DT-EER (Drive Trace Energy Economy Rating)	-0.2002	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	3.063	--
MFR FE (Manufacturer Fuel Economy)	31.95	31.95
NOX (Nitrogen Oxide)	0.003	--
HC-NM (Non-methane Hydrocarbon)	0.0005	--
NMOG (Non-methane organic gases)	0.0005	--
HC-TOTAL (Total Hydrocarbon)	0.0005	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	276	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	276	--

Manufacturer Test Comments New Cayenne and Cayenne S ("E3" platform); Highway, E10 fuel, Porsche internal test name SEP654; Porsche test # 1805444

Certification Summary Information Report

Test Group		MPRXT03.0CV6				Evaporative/Refueling Family				MPRXR0150REE		
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	CREE	999	--	--	--	0.43	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG	0.0005	--	1.04	--	0.0082	--	0.009	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.0035	--	1.04	--	--	--	0.028	0.070	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.0030	--	--	--	0.0160	--	0.019	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0005	--	1.04	--	0.0082	--	0.009	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0035	--	1.04	--	--	--	0.028	0.070	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0030	--	--	--	0.0160	--	0.019	999.999	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	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0150REE
Test #	KPRX10054203	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline
Test Date	05/04/2018	Fuel	Gasoline
Fuel Batch ID	PUTG96	Fuel Calibration Number	456
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Determined
Verify Test Lab ID	MZU Weissach		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4630	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)
CO (Carbon Monoxide)	0.18828	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-3.4034	--
DT-EER (Drive Trace Energy Economy Rating)	-0.76726	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-4.0303	--
MFR FE (Manufacturer Fuel Economy)	31.6	31.6
NOX (Nitrogen Oxide)	0.00204	--
HC-NM (Non-methane Hydrocarbon)	0.00815	--
NMOG (Non-methane organic gases)	0.0085	--
HC-TOTAL (Total Hydrocarbon)	0.01064	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	279	279

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	279.1	--

Manufacturer Test Comments

New Cayenne S ("E3" platform); Highway test for Fuel Economy, E0 fuel, Porsche test # 1814159

Certification Summary Information Report

Test Group		MPRXT03.0CV6			Evaporative/Refueling Family					MPRXR0150REE		
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	CREE	279	--	--	--	0.43	--	279	--	--
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG	0.0085	--	1.04	--	0.0082	--	0.017	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.0105	--	1.04	--	--	--	0.035	0.070	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.0020	--	--	--	0.0160	--	0.018	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0085	--	1.04	--	0.0082	--	0.017	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0105	--	1.04	--	--	--	0.035	0.070	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0020	--	--	--	0.0160	--	0.018	999.999	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	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0150REE
Test #	KPRX10054033	Test Procedure	90 - US06
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	02/02/2018	Fuel	Gasoline
Fuel Batch ID	EK1603	Fuel Calibration Number	6
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Determined
Verify Test Lab ID	MZU Weissach		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4389	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)	
CO2 BAG 1 (Bag 1 Carbon Dioxide)	675.52	--	
FE BAG 1 (Bag 1 Fuel Economy)	13.04	13.04	
CO2 BAG 2 (Bag 2 Carbon Dioxide)	364.81	--	
FE BAG 2 (Bag 2 Fuel Economy)	24.09	24.09	
METHANE (CH4 - Methane)	0.0033	--	
CO (Carbon Monoxide)	0.85291	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.013	--	
DT-EER (Drive Trace Energy Economy Rating)	0.0363	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-2.037	--	
HCHO (Formaldehyde)	0.0001	--	
MFR FE (Manufacturer Fuel Economy)	20.29	20.29	
NOX (Nitrogen Oxide)	0.00834	--	
N2O (Nitrous Oxide)	0	--	
HC-NM (Non-methane Hydrocarbon)	0.00565	--	
NMOG (Non-methane organic gases)	0.00582	--	
PM (Particulate Matter)	0.00014	--	
HC-TOTAL (Total Hydrocarbon)	0.00881	--	
Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE	
Carbon-Related Exhaust Emissions	435	--	

Certification Summary Information Report

Test Group		MPRXT03.0CV6				Evaporative/Refueling Family				MPRXR0150REE		
		Test Result Name		Unrounded Test Result		Verify Calculated CO2						
		Carbon dioxide		433.52		--						
Manufacturer Test Comments		New Cayenne and Cayenne S ("E3" platform); US06 for certification; E10 fuel; Porsche internal test vehicle name SEP654; Porsche Test No. 1805446										
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	0.85	--	--	--	0.26	--	1.1	999.9	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG	0.0058	--	1.03	--	0.0082	--	0.014	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.008	--	--	--	0.0160	--	0.02	999.99	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	PM	0.0001	--	--	--	0.000	--	0.000	0.006	Pass
CA	150,000 miles	California LEV-III ULEV70	CO	0.85	--	--	--	0.26	--	1.1	999.9	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0058	--	1.03	--	0.0082	--	0.014	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0083	--	--	--	0.0160	--	0.024	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	PM	0.0001	--	--	--	0.0000	--	0.000	0.006	Pass

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0150REE
Test #	KPRX10054035	Test Procedure	95 - SC03
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	03/09/2018	Fuel	Gasoline
Fuel Batch ID	Audi17	Fuel Calibration Number	1
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Determined
Verify Test Lab ID	MZU Weissach		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4527	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)
METHANE (CH4 - Methane)	0.0017	--
CO (Carbon Monoxide)	0.0363	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.88	--
DT-EER (Drive Trace Energy Economy Rating)	-0.63	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.47	--
MFR FE (Manufacturer Fuel Economy)	18.95	18.95
NOX (Nitrogen Oxide)	0.0154	--
HC-NM (Non-methane Hydrocarbon)	0	--
PM (Particulate Matter)	0.0005	--
HC-TOTAL (Total Hydrocarbon)	0.0014	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	463	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	462.99	--

Manufacturer Test Comments

SC03 for certification; new Cayenne and Cayenne S ("E3" platform); E10 fuel; Porsche internal test vehicle name SEP654; Porsche Test No. ING-08-20180309-18

Certification Summary Information Report

Test Group		MPRXT03.0CV6				Evaporative/Refueling Family				MPRXR0150REE		
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	0.04	--	--	--	0.26	--	0.3	999.9	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.0154	--	--	--	0.0160	--	0.031	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	CO	0.04	--	--	--	0.26	--	0.3	999.9	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0154	--	--	--	0.0160	--	0.031	999.999	Pass

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0150REE
Fuel Properties			
Fuel Batch ID	CAFW17	Fuel Calibration Number	745
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	12/14/2017
Fuel Batch Calibration Effective Date	12/14/2017	Fuel Batch Calibration Ineffective Date	12/31/2022
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.751
Fuel Ethanol Volume Percent (%)	10	Fuel Net Heating Value (BTU / lb)	17789
Fuel Blend Carbon Weight Fraction	0.828	Weight Fraction CO2	--
Fuel Batch ID	FH0303	Fuel Calibration Number	10
Test Fuel Type	29 - Cold CO E10 Premium Gasoline (Tier 3)	Fuel Batch Calibration Date	08/03/2017
Fuel Batch Calibration Effective Date	08/03/2017	Fuel Batch Calibration Ineffective Date	12/31/2022
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.749
Fuel Ethanol Volume Percent (%)	10.1	Fuel Net Heating Value (BTU / lb)	17756
Fuel Blend Carbon Weight Fraction	0.828	Weight Fraction CO2	--
Fuel Batch ID	26596	Fuel Calibration Number	2
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	05/10/2017
Fuel Batch Calibration Effective Date	05/10/2017	Fuel Batch Calibration Ineffective Date	05/10/2032
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.743
Fuel Ethanol Volume Percent (%)	9.9	Fuel Net Heating Value (BTU / lb)	18010
Fuel Blend Carbon Weight Fraction	0.823	Weight Fraction CO2	--
Fuel Batch ID	EK1603	Fuel Calibration Number	6
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	12/26/2016
Fuel Batch Calibration Effective Date	12/30/2016	Fuel Batch Calibration Ineffective Date	12/31/2018
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.76
Fuel Ethanol Volume Percent (%)	9.5	Fuel Net Heating Value (BTU / lb)	17785
Fuel Blend Carbon Weight Fraction	0.832	Weight Fraction CO2	--
Fuel Batch ID	Audi17	Fuel Calibration Number	1

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0150REE
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	07/31/2017
Fuel Batch Calibration Effective Date	07/31/2017	Fuel Batch Calibration Ineffective Date	12/31/2018
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.76
Fuel Ethanol Volume Percent (%)	9.8	Fuel Net Heating Value (BTU / lb)	17785
Fuel Blend Carbon Weight Fraction	0.832	Weight Fraction CO2	--
Fuel Batch ID	PUTG96	Fuel Calibration Number	456
Test Fuel Type	61 - Tier 2 Cert Gasoline	Fuel Batch Calibration Date	05/27/2016
Fuel Batch Calibration Effective Date	06/01/2016	Fuel Batch Calibration Ineffective Date	12/31/2017
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.737
Fuel Ethanol Volume Percent (%)	--	Fuel Net Heating Value (BTU / lb)	18495
Fuel Blend Carbon Weight Fraction	0.863	Weight Fraction CO2	--

Certification Summary Information Report

Test Group		MPRXT03.0CV6			Evaporative/Refueling Family		MPRXR0150REE		
Consolidated List of Standards									
Exhaust Standards									
Cert Region		Federal			Cert/In-Use Code		Cert		
Vehicle Class		LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)			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	METHANE	--	--	--	--	--	--	0.0034	0.030
120,000 miles	N2O	--	--	--	--	--	--	0.0010	0.010
150,000 miles	CO	--	--	--	--	--	--	0.26	1.7
150,000 miles	CO-COMP	--	--	--	--	--	--	0.26	4.2
150,000 miles	CREE	--	--	--	--	--	--	0.43	999.9
150,000 miles	HCHO	--	--	--	--	--	--	0.0000	0.004
150,000 miles	NMOG	--	--	1.10	--	--	--	0.0082	999.999
150,000 miles	NMOG+NOX	--	--	1.10	--	--	--	0.0242	0.070
150,000 miles	NMOG+NOX-COMP	--	--	1.10	--	--	--	0.0242	0.080
150,000 miles	NOX	--	--	--	--	--	--	0.0160	999.999
150,000 miles	PM	--	--	--	--	--	--	0.0000	0.003
Cert Region		Federal			Cert/In-Use Code		Cert		
Vehicle Class		LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)			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
150,000 miles	CREE	--	--	--	--	--	--	0.43	999.9
150,000 miles	NMOG	--	--	1.04	--	--	--	0.0082	999.999
150,000 miles	NMOG+NOX	--	--	1.04	--	--	--	0.0242	0.070
150,000 miles	NOX	--	--	--	--	--	--	0.0160	999.999

Certification Summary Information Report

Test Group	MPRXT03.0CV6			Evaporative/Refueling Family			MPRXR0150REE		
Cert Region	California + CAA Section 177 states			Cert/In-Use Code			Cert		
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)			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
120,000 miles	METHANE	--	--	--	--	--	--	0.0034	0.030
120,000 miles	N2O	--	--	--	--	--	--	0.0010	0.010
150,000 miles	CO	--	--	--	--	--	--	0.26	1.7
150,000 miles	CO-COMP	--	--	--	--	--	--	0.26	4.2
150,000 miles	HCHO	--	--	--	--	--	--	0.0000	.004
150,000 miles	NMOG	--	--	1.10	--	--	--	0.0082	999.999
150,000 miles	NMOG+NOX	--	--	1.10	--	--	--	0.0242	0.070
150,000 miles	NMOG+NOX-COMP	--	--	1.10	--	--	--	0.0242	0.080
150,000 miles	NOX	--	--	--	--	--	--	0.0160	999.999
150,000 miles	PM	--	--	--	--	--	--	0.0000	0.003

Cert Region	California + CAA Section 177 states			Cert/In-Use Code			Cert		
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)			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	--	--	--	--	--	--	0.26	999.9
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0082	999.999
150,000 miles	NOX	--	--	--	--	--	--	0.0160	999.999
150,000 miles	PM	--	--	--	--	--	--	0.0000	0.006

Certification Summary Information Report

Test Group	MPRXT03.0CV6			Evaporative/Refueling Family			MPRXR0150REE		
Cert Region	Federal			Cert/In-Use Code			Cert		
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)			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	--	--	--	--	--	--	0.26	999.9
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0082	999.999
150,000 miles	NOX	--	--	--	--	--	--	0.0160	999.99
150,000 miles	PM	--	--	--	--	--	--	0.000	0.006

Cert Region	Federal			Cert/In-Use Code			Cert		
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)			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	--	--	--	--	--	--	0.26	999.9
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0082	999.999
150,000 miles	NOX	--	--	--	--	--	--	0.0160	999.999

Cert Region	California + CAA Section 177 states			Cert/In-Use Code			Cert		
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)			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	--	--	--	--	--	--	0.26	999.9
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0082	999.999
150,000 miles	NOX	--	--	--	--	--	--	0.0160	999.999

Certification Summary Information Report

Test Group		MPRXT03.0CV6			Evaporative/Refueling Family			MPRXR0150REE	
Cert Region		Federal			Cert/In-Use Code			Cert	
Vehicle Class		LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)			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	--	--	--	--	--	--	0.26	12.5
120,000 miles	HC-NM	--	--	--	--	--	--	0.01	0.3

Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert	
Vehicle Class		LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)			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	--	--	--	--	--	--	0.26	12.5
120,000 miles	HC-NM	--	--	--	--	--	--	0.01	0.3

Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert	
Vehicle Class		LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)			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	--	--	1.04	--	--	--	0.0082	999.999
150,000 miles	NMOG+NOX	--	--	1.04	--	--	--	0.0242	0.070
150,000 miles	NOX	--	--	--	--	--	--	0.0160	999.999

Evaporative/Refueling Standards

Evaporative/Refueling Family		MPRXR0150REE		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Both		Standard Level		California LEV-III Zero Evap (Option 2)	
Test Procedure		Federal fuel 3-day evap					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.450	0.0140		

Certification Summary Information Report

Test Group		MPRXT03.0CV6		Evaporative/Refueling Family		MPRXR0150REE	
Evaporative/Refueling Family		MPRXR0150REE		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Both		Standard Level		California LEV-III Zero Evap (Option 2)	
Test Procedure		Federal fuel refueling test (ORVR)					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.20	0.007		
Evaporative/Refueling Family		MPRXR0150REE		Cert Region		Federal	
Cert/In-Use Code		Both		Standard Level		Federal Tier 3 Evap	
Test Procedure		Evap Canister Bleed Test					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	120,000 miles	HC-TOTAL-EQUIV	--	0.020	0.0000		
Evaporative/Refueling Family		MPRXR0150REE		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Both		Standard Level		California LEV-III Zero Evap (Option 2)	
Test Procedure		2-day evap					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.450	0.0108		
Evaporative/Refueling Family		MPRXR0150REE		Cert Region		Federal	
Cert/In-Use Code		Both		Standard Level		Federal Tier 3 Evap	
Test Procedure		Federal fuel 3-day evap					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	120,000 miles	HC-TOTAL-EQUIV	--	0.450	0.0140		
Evaporative/Refueling Family		MPRXR0150REE		Cert Region		Federal	
Cert/In-Use Code		Both		Standard Level		Federal Tier 3 Evap	
Test Procedure		2-day evap					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	120,000 miles	HC-TOTAL-EQUIV	--	0.450	0.0108		

Certification Summary Information Report

Test Group		MPRXT03.0CV6		Evaporative/Refueling Family		MPRXR0150REE	
Evaporative/Refueling Family		MPRXR0150REE		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Both		Standard Level		California LEV-III Zero Evap (Option 2)	
Test Procedure		Federal Fuel Running Loss					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.05	0.000		
Evaporative/Refueling Family		MPRXR0150REE		Cert Region		Federal	
Cert/In-Use Code		Both		Standard Level		Federal Tier 3 Evap	
Test Procedure		Federal Fuel Running Loss					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	120,000 miles	HC-TOTAL-EQUIV	--	0.05	0.000		
Evaporative/Refueling Family		MPRXR0150REE		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Both		Standard Level		California LEV-III Zero Evap (Option 2)	
Test Procedure		Evap Canister Bleed Test					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.020	0.0000		
Evaporative/Refueling Family		MPRXR0150REE		Cert Region		Federal	
Cert/In-Use Code		Both		Standard Level		Federal Tier 3 Evap	
Test Procedure		Federal fuel refueling test (ORVR)					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	120,000 miles	HC-TOTAL-EQUIV	--	0.20	0.007		

Certification Summary Information Report

Test Group		MPRXT03.0CV6	Evaporative/Refueling Family		MPRXR0150REE
Glossary					
Useful Life					
4	4,000 miles		120	120,000 miles	
50	50,000 miles		150	150,000 miles	
100	100,000 miles				
Emission Name					
HC-TOTAL	Total Hydrocarbon		METHANOL	CH3OH - Methanol	
CO	Carbon Monoxide		N2O	Nitrous Oxide	
CO2	Carbon dioxide		SPITBACK	Spitback Hydrocarbon in grams	
CREE	Carbon-Related Exhaust Emissions		AMP-HRS	Integrated Amp-hours	
OPT-CREE	Optional Carbon-Related Exhaust Emissions		START-SOC	System Start State of Charge Watt-hours	
NOX	Nitrogen Oxide		END-SOC	System End State of Charge Watt-hours	
PM	Particulate Matter		ACT-DISTANCE	Actual Distance Driven (miles)	
PM-COMP	SFTP Composite Particulate Matter		AS-VOLT	Average System Voltage	
HC-NM	Non-methane Hydrocarbon		CO2 BAG 1	Bag 1 Carbon Dioxide	
OMHCE	Organic material Hydrocarbon Equivalent		CO2 BAG 2	Bag 2 Carbon Dioxide	
OMNMHCE	Organic material non-methane HC equivalent		CO2 BAG 3	Bag 3 Carbon Dioxide	
NMOG	Non-methane organic gases		CO2 BAG 4	Bag 4 Carbon Dioxide	
HCHO	Formaldehyde		NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides	
H3C2HO	Acetaldehyde		NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides	
HC-NM+NOX	SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03		DT-IWRR	Drive Trace Inertia Work Ratio Rating	
HC-NM+NOX-COMP	SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides		DT-ASCR	Drive Trace Absolute Speed Change Rating	
CO-COMP	SFTP Composite Carbon Monoxide		DT-EER	Drive Trace Energy Economy Rating	
ETHANOL	C2H5OH - Ethanol		COMB-CREE	Combined Carbon-Related Exhaust Emissions	
FE BAG 1	Bag 1 Fuel Economy		COMB-OPT-CREE	Combined Optional Carbon-Related Exhaust Emissions	
FE BAG 2	Bag 2 Fuel Economy		HC-TOTAL-EQUIV	Total Hydrocarbon equivalent - Evap only	
FE BAG 3	Bag 3 Fuel Economy		METHANE-COMB	Combined CH4 for HD 2b/3 vehicles only	
FE BAG 4	Bag 4 Fuel Economy		N2O-COMB	Combined Nitrous Oxide for HD 2b/3 vehicles only	
MFR FE	Manufacturer Fuel Economy		LEAK-DIA	Effective Leak Diameter (inches)	
HC	Hydrocarbon for Running Loss and ORVR		LEAK-GAS CAP	Gas Cap Leakage (cc/min)	
METHANE	CH4 - Methane		CO2-COMB	Combined Carbon Dioxide for HD 2b/3 Vehicles Only	
Certification Region					
CA	California + CAA Section 177 states		FA	Federal	
Exhaust Emission Standard Level					
B1	Federal Tier 2 Bin 1		L3ULEV340	California LEV-III ULEV340	
B2	Federal Tier 2 Bin 2		L3ULEV250	California LEV-III ULEV250	
B3	Federal Tier 2 Bin 3		L3ULEV200	California LEV-III ULEV200	
B4	Federal Tier 2 Bin 4		L3SULEV170	California LEV-III SULEV170	
B5	Federal Tier 2 Bin 5		L3SULEV150	California LEV-III SULEV150	

Certification Summary Information Report

Test Group		MPRXT03.0CV6	Evaporative/Refueling Family		MPRXR0150REE
B6	Federal Tier 2 Bin 6		L3LEV630	California LEV-III LEV630	
B7	Federal Tier 2 Bin 7		L3ULEV570	California LEV-III ULEV570	
B8	Federal Tier 2 Bin 8		L3ULEV400	California LEV-III ULEV400	
B9	Federal Tier 2 Bin 9		L3ULEV270	California LEV-III ULEV270	
B10	Federal Tier 2 Bin 10		L3SULEV230	California LEV-III SULEV230	
B11	Federal Tier 2 Bin 11		L3SULEV200	California LEV-III SULEV200	
HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)		T3B160	Federal Tier 3 Bin 160	
HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)		T3B125	Federal Tier 3 Bin 125	
L2	California LEV-II LEV		T3B110	Federal Tier 3 Transitional Bin 110	
L2OP	California LEV-II LEV Optional		T3B85	Federal Tier 3 Transitional Bin 85	
U2	California LEV-II ULEV		T3SULEV30	Federal Tier 3 Transitional LEV-II SULEV30 Carryover	
S2	California LEV-II SULEV		T3B70	Federal Tier 3 Bin 70	
ZEV	California ZEV		T3B50	Federal Tier 3 Bin 50	
OT	Other		T3B30	Federal Tier 3 Bin 30	
T1	Federal Tier 1		T3B20	Federal Tier 3 Bin 20	
PZEV	California PZEV		T3B0	Federal Tier 3 Bin 0	
L2LEV160	California LEV-II LEV160		HDV2B395	Federal Tier 3 HD Class 2b Transitional Bin 395	
L2ULEV125	California LEV-II ULEV125		HDV2B340	Federal Tier 3 HD Class 2b Transitional Bin 340	
L2SULEV30	California LEV-II SULEV30		HDV2B250	Federal Tier 3 HD Class 2b Bin 250	
L2LEV395	California LEV-II LEV395		HDV2B200	Federal Tier 3 HD Class 2b Bin 200	
L2ULEV340	California LEV-II ULEV340		HDV2B170	Federal Tier 3 HD Class 2b Bin 170	
L2LEV630	California LEV-II LEV630		HDV2B150	Federal Tier 3 HD Class 2b Bin 150	
L2ULEV570	California LEV-II ULEV570		HDV2B0	Federal Tier 3 HD Class 2b Bin 0	
L3LEV160	California LEV-III LEV160		HDV3B630	Federal Tier 3 HD Class 3 Transitional Bin 630	
L3ULEV125	California LEV-III ULEV125		HDV3B570	Federal Tier 3 HD Class 3 Transitional Bin 570	
L3ULEV70	California LEV-III ULEV70		HDV3B400	Federal Tier 3 HD Class 3 Bin 400	
L3ULEV50	California LEV-III ULEV50		HDV3B270	Federal Tier 3 HD Class 3 Bin 270	
L3SULEV30	California LEV-III SULEV30		HDV3B230	Federal Tier 3 HD Class 3 Bin 230	
L3SULEV20	California LEV-III SULEV20		HDV3B200	Federal Tier 3 HD Class 3 Bin 200	
L3LEV395	California LEV-III LEV395		HDV3B0	Federal Tier 3 HD Class 3 Bin 0	
Transmission Type Code					
AMS	Automated Manual- Selectable (e.g. Automated Manual with paddles)	M	Manual		
A	Automatic	OT	Other		
AM	Automated Manual	SA	Semi-Automatic		
CVT	Continuously Variable	SCV	Selectable Continuously Variable (e.g. CVT with paddles)		
Drive System Code					
4	4-Wheel Drive	P	Part-time 4-Wheel Drive		
F	2-Wheel Drive, Front	A	All Wheel Drive		
R	2-Wheel Drive, Rear				

Certification Summary Information Report

Test Group		MPRXT03.0CV6		Evaporative/Refueling Family		MPRXR0150REE	
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		

Section 7-Test Results

7.04>> CSI Report, Evap Family MPRXR0140RMA

The Certification Summary Information (CSI) report for this Test Group and second Evaporative Family combination begins on the following page.

Certification Summary Information Report

Manufacturer	Porsche AG	Manufacturer Code	PRX
Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
Certificate Number	--	CARB Executive Order #	--
Certificate Issue Date	--	Certificate Revision Date	--
Certificate Effective Date	--	Conditional Certificate	--
CSI Revision #	--	CSI Submission/Revision Date	10/07/2020 10:41:37 AM
Model Year	2021		

Test Group Information

CSI Type	Update for Correction	Running Change Reference Number	--
GHG Exempt Status	Not Exempt		

Drive Sources and Fuel(s)

Drive Source #1: Combustion Engine

Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator
Gasoline	Spark Ignition Direct fuel injection	No

Hybrid Indicator	No		
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	--
Multiple Fuel Combustion	--	Off-board Charge Capable Indicator	--
Fuel Cell Indicator	--	EPA Vehicle Class	LDT2, LDT3
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	MPRXGPGNNCT6	Durability Group Equivalency Factor	1
Reduced Fee Test Group	No	Certification Region Code(s)	FA, CA
Complies with HD GHG 2b/3 regulations?	No		
Introduction into Commerce Date	10/14/2020	CAP2000 Conditional Certificate?	N/A
Independent Commercial Importer?	--	Alternative Fuel Converter Certificate?	--
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	MPRXV03.0PV6
Test Group OBD Compliance Level	Partial - with deficiencies and penalty	Number of Test Group OBD Deficiencies	3
OBD Deficiencies Comments	OBD approval E-120-156; engine stop-start, evaporative system, and comprehensive component; fine for CCM deficiency		
Mfr Test Group Comments	Cayenne, Cayenne S, Cayenne Coupe, Cayenne Coupe S, Macan S, Macan Turbo, Macan GTS; all carryover data; Auto mode; No downshifts; No sport button usage. User-selectable transmission includes Drive, Sport, and Sport Plus modes. EDV testing performed in Drive mode.		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
Evaporative/Refueling Family Information			
Evaporative Summary Information Type	New	Submission/Correction Date	07/30/2020 11:30:21 AM
Integrated ORVR?	Yes	Fuel(s)	Gasoline
Multiple Fuel Storage	--		
Bladder Fuel Tank?	No		
Fuel Tank Material	Plastic	Fuel Tank Material Description	Plastic
Fill Pipe Seal Type	Liquid seal		
Air Intake System Vapor Storage Device?	No	Air Intake System Vapor Storage Device Description	--
Fuel System Vapor Storage Canister?	Yes	Other Vapor Storage	--
Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)	140	Number of Primary Canisters	1
Number of Bleed Canisters	0	Bleed Canister Total Working Capacity (grams)	--
Mfr Evaporative/Refueling Family Comments	Evap System for all Macans		
Leak Family Details			
Leak Family Indicator	No		
Canister Bleed Test Indicator	No	Applicability of Evaporative Canister Bleed Test	--
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	--		

Certification Summary Information Report

Test Group		MPRXT03.0CV6		Evaporative/Refueling Family		MPRXR0140RMA	
Models Covered by this Certificate							
Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - Type	- # of Gears	Trans - Lockup
Porsche AG	1 - Porsche	312 - Macan GTS	Federal	All Wheel Drive	Automated Manual-Selectable (e.g. Automated Manual with paddles)	7	No
Porsche AG	1 - Porsche	311 - Macan S	California + CAA Section 177 states	All Wheel Drive	Automated Manual-Selectable (e.g. Automated Manual with paddles)	7	No
Porsche AG	1 - Porsche	321 - Macan Turbo	Federal	All Wheel Drive	Automated Manual-Selectable (e.g. Automated Manual with paddles)	7	No
Porsche AG	1 - Porsche	312 - Macan GTS	California + CAA Section 177 states	All Wheel Drive	Automated Manual-Selectable (e.g. Automated Manual with paddles)	7	No
Porsche AG	1 - Porsche	321 - Macan Turbo	California + CAA Section 177 states	All Wheel Drive	Automated Manual-Selectable (e.g. Automated Manual with paddles)	7	No
Porsche AG	1 - Porsche	311 - Macan S	Federal	All Wheel Drive	Automated Manual-Selectable (e.g. Automated Manual with paddles)	7	No
Engine Description							
Hybrid Type		--		Hybrid Description		--	
Engine Type		4-Stroke Spark Ignition		Mfr Engine Description		--	
Engine Block Arrangement		V-shaped engine		Mfr Engine Block Arrangement Description		--	
Camless Valvetrain Indicator		No		Oil Viscosity/Classification		0W40	
Number of Cylinders/Rotors		6		Mechanically Variable Compression Ratio Indicator		N	
After Treatment Device(s) (ATD)							
ATD Number	ATD Type	ATD Precious Metal	Substrate Material	Substrate Construction			
1	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith			
2	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith			
Mfr After Treatment Device (ATD) Comments		Aftertreatment device section above describes all pre- and main catalysts; Cayenne, Cayenne Coupe, and Macan S 3.0L have only one set, in a single exhaust system; Cayenne S, Cayenne S Coupe, Macan Turbo and Macan GTS 2.9L have two sets, in a dual exhaust system; systems differ in catalyst loading, catalyst volume, and precious metal loading					
Direct Ozone Reduction (DOR) Device		Not Equipped					
Mfr Emission Control Device Comments		2TWC(2), 2HO2S(2), SFI (2WU-TWC/2TWC/MAP/DFI/2WR-HO2S/2HO2S/2TC/2CAC) (WU-TWC/MAP/DFI/WR-HO2S/HO2S/1TC/2CAC)					

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
Engine Configuration Number 1			
Engine Displacement (liters)	2.9	Engine Rated Horsepower	434
Number of Inlet Valves Per Cylinder	2	Number of Exhaust Valves Per Cylinder	2
Air Aspiration Method	Turbocharged	Number of Air Aspiration Devices	2
Air Aspiration Device Configuration	Parallel	Charge Air Cooler Type	Air
Air Aspiration Drive Method(s)	Mechanical		
Cylinder Deactivation	No		
Cylinder Deactivation Description	--		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	VarioCam Plus		
Variable Valve Lift?	Yes		
Variable Valve Lift System Description	VarioCam Plus		
Number of Knock Sensors	1	Number of Air/Fuel Sensors	4
Air/Fuel Sensor # 1 Type	Heated oxygen	Air/Fuel Sensor # 1 Description	--
Air/Fuel Sensor # 2 Type	Heated oxygen	Air/Fuel Sensor # 2 Description	--
Air/Fuel Sensor # 3 Type	Heated oxygen	Air/Fuel Sensor # 3 Description	--
Air/Fuel Sensor # 4 Type	Heated oxygen	Air/Fuel Sensor # 4 Description	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	Cooled Exhaust Gas Recirculation	--
EGR Type	--	Exhaust Gas Recirculation Description if 'Other'	--
Closed Loop Air Injection System	--		
Air Injection Type	--	Air Injection Type if 'Other'	--
Mfr Engine Configuration Comments	engine for Cayenne S and Cayenne S Coupe and Macan Turbo 2WU-TWC/2TWC/MAP/DFI/2WR-HO2S/2HO2S/2TC/2CAC		

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
Engine Configuration Number 2			
Engine Displacement (liters)	3.0	Engine Rated Horsepower	335
Number of Inlet Valves Per Cylinder	2	Number of Exhaust Valves Per Cylinder	2
Air Aspiration Method	Turbocharged	Number of Air Aspiration Devices	1
Air Aspiration Device Configuration	Single	Charge Air Cooler Type	Air
Air Aspiration Drive Method(s)	Mechanical		
Cylinder Deactivation	No		
Cylinder Deactivation Description	--		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	VarioCam Plus		
Variable Valve Lift?	Yes		
Variable Valve Lift System Description	VarioCam Plus		
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	Heated oxygen	Air/Fuel Sensor # 2 Description	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	Cooled Exhaust Gas Recirculation	No
EGR Type	--	Exhaust Gas Recirculation Description if 'Other'	--
Closed Loop Air Injection System	No		
Air Injection Type	--	Air Injection Type if 'Other'	--
Mfr Engine Configuration Comments	engine for Cayenne and Cayenne Coupe WU-TWC/MAP/DFI/WR-HO2S/HO2S/1TC/2CAC		

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
Engine Configuration Number 3			
Engine Displacement (liters)	3.0	Engine Rated Horsepower	348
Number of Inlet Valves Per Cylinder	2	Number of Exhaust Valves Per Cylinder	2
Air Aspiration Method	Turbocharged	Number of Air Aspiration Devices	1
Air Aspiration Device Configuration	Single	Charge Air Cooler Type	Air
Air Aspiration Drive Method(s)	Mechanical		
Cylinder Deactivation	No		
Cylinder Deactivation Description	--		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	VarioCam Plus		
Variable Valve Lift?	Yes		
Variable Valve Lift System Description	VarioCam Plus		
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	Heated oxygen	Air/Fuel Sensor # 2 Description	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	Cooled Exhaust Gas Recirculation	No
EGR Type	--	Exhaust Gas Recirculation Description if 'Other'	--
Closed Loop Air Injection System	No		
Air Injection Type	--	Air Injection Type if 'Other'	--
Mfr Engine Configuration Comments	Engine for Macan S WU-TWC//MAP/DFI/WR-HO2S/HO2S/TC/2CAC		

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA								
Engine Configuration Number 4											
Engine Displacement (liters)	2.9	Engine Rated Horsepower	375								
Number of Inlet Valves Per Cylinder	2	Number of Exhaust Valves Per Cylinder	2								
Air Aspiration Method	Turbocharged	Number of Air Aspiration Devices	2								
Air Aspiration Device Configuration	Parallel	Charge Air Cooler Type	Air								
Air Aspiration Drive Method(s)	Mechanical										
Cylinder Deactivation	No										
Cylinder Deactivation Description	--										
Variable Valve Timing	Yes										
Variable Valve Timing System Description	VarioCam Plus										
Variable Valve Lift?	Yes										
Variable Valve Lift System Description	VarioCam Plus										
Number of Knock Sensors	1	Number of Air/Fuel Sensors	4								
Air/Fuel Sensor # 1 Type	Heated oxygen	Air/Fuel Sensor # 1 Description	--								
Air/Fuel Sensor # 2 Type	Heated oxygen	Air/Fuel Sensor # 2 Description	--								
Air/Fuel Sensor # 3 Type	Heated oxygen	Air/Fuel Sensor # 3 Description	--								
Air/Fuel Sensor # 4 Type	Heated oxygen	Air/Fuel Sensor # 4 Description	--								
Mfr Air/Fuel Sensor Comments	--										
Exhaust Gas Recirculation	No	Cooled Exhaust Gas Recirculation	No								
EGR Type	--	Exhaust Gas Recirculation Description if 'Other'	--								
Closed Loop Air Injection System	No										
Air Injection Type	--	Air Injection Type if 'Other'	--								
Mfr Engine Configuration Comments	engine for Macan GTS 2WU-TWC/2TWC/MAP/DFI/2WR-HO2S/2HO2S/2TC/2CAC										
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	KPRX10054031	KPRX10054033	KPRX10054035	KPRX10054034	KPRX10054032	20.9	228.2	29.1	286.1	--	
SFTP LEV-III Official Test Numbers											
Test Group Fuel	FTP	US06	SC03								
Gasoline	KPRX10054031	KPRX10054033	KPRX10054035								

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA						
Emission Data Vehicle Information									
Vehicle ID / Configuration	EC-95BII-19 / 0	Manufacturer Vehicle Configuration Number	0						
Original Test Group Name	KPRXT02.0MR4	Original Evaporative/Refueling Family	KPRXR0140RMA						
Original Test Vehicle Model Year	2019								
Vehicle Model									
Represented Test Vehicle Make	Porsche	Represented Test Vehicle Model	Macan						
Leak Family Details									
Leak Family Identifier	--	Leak Family Name	--						
Drive Sources and Fuel System Details									
	<table border="1"> <tr> <th>Drive Source and Fuel#</th><th>Drive Source</th><th>Fuel</th></tr> <tr> <td>1</td><td>Combustion Engine</td><td>Gasoline</td></tr> </table>	Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	Gasoline		
Drive Source and Fuel#	Drive Source	Fuel							
1	Combustion Engine	Gasoline							
Hybrid Indicator	No								
Multiple Fuel Storage	--	Multiple Fuel Combustion	--						
Fuel Cell Indicator	--	Rechargeable Energy Storage System Indicator	--						
Rechargeable Energy Storage System	--	Rechargeable Energy Storage System, if 'Other'	--						
Off-board charge Capable Indicator	--								
Odometer Correction -- Initial	0	Odometer Correction Factor	0.9921						
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles								
Odometer Correction Units	Miles								
Engine Code	DLH	Rated Horsepower	248						
Displacement (liters)	2								
Air Aspiration Method	Turbocharged	Air Aspiration Method, if 'Other'							
Number of Air Aspiration Devices	1	Air Aspiration Device Configuration	Single						
Charge Air Cooler Type	Air	Drive Mode While Testing	2-Wheel Drive, Rear						
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)						
Curb Weight (lbs)	4237	Equivalent Test Weight (pounds)	4500						
GVWR (lbs)	5534	N/V Ratio	43.8						
Axle Ratio	4.67								
Transmission Type	Automated Manual- Selectable (e.g. Automated Manual with paddles)	# of Transmission Gears	7						
Transmission Lockup	No	Creep Gear	No						

Certification Summary Information Report

Test Group		MPRXT03.0CV6			Evaporative/Refueling Family		MPRXR0140RMA	
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	58.001	0.31114	0.023989	58.001	0.31114	0.023989	17.8	
Cold CO	58.001	0.31114	0.023989	58.001	0.31114	0.023989	N/A	
US06	58.001	0.31114	0.023989	58.001	0.31114	0.023989	N/A	
Emission Control Device Comments		WU-TWC/MAP/DFI/WR-HO2S/HO2S/TC/CAC						
Manufacturer Test Vehicle Comments		Macan Base (facelift and engine upgrade for 2019) certification vehicle; for evaporative emissions tests						

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
Test #	KPRX10057789	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	12/12/2018	Fuel	N/A
Fuel Batch ID	GH210	Fuel Calibration Number	14
Vehicle Class	N/A	DF Type	Mfr. Assigned
Verify Test Lab ID	MZU Weissach		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4037	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	380.8	--
FE BAG 1 (Bag 1 Fuel Economy)	22.88	22.88
CO2 BAG 2 (Bag 2 Carbon Dioxide)	344.33	--
FE BAG 2 (Bag 2 Fuel Economy)	25.4	25.4
CO2 BAG 3 (Bag 3 Carbon Dioxide)	324.47	--
FE BAG 3 (Bag 3 Fuel Economy)	26.94	26.94
METHANE (CH4 - Methane)	0.0023	--
CO (Carbon Monoxide)	0.18127	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.6689	--
DT-EER (Drive Trace Energy Economy Rating)	-1.1344	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-2.4606	--
HCHO (Formaldehyde)	0.00012	--
MFR FE (Manufacturer Fuel Economy)	25.22	25.22
NOX (Nitrogen Oxide)	0.0142	--
HC-NM (Non-methane Hydrocarbon)	0.01291	--
NMOG (Non-methane organic gases)	0.01419	--
HC-TOTAL (Total Hydrocarbon)	0.0151	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	347	999

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
	Test Result Name	Unrounded Test Result	Verify Calculated CO2
	Carbon dioxide	346.44	--
Manufacturer Test Comments	New Macan and Macan S (facelift, new engine), FTP for 3-day evap test; E10 fuel, Porsche Test #1839268		

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
Test #	KPRX10057791	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	12/18/2018	Fuel	N/A
Fuel Batch ID	GH210	Fuel Calibration Number	14
Vehicle Class	N/A	DF Type	Mfr. Assigned
Verify Test Lab ID	MZU Weissach		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4126	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	365.79	--
FE BAG 1 (Bag 1 Fuel Economy)	23.77	23.77
CO2 BAG 2 (Bag 2 Carbon Dioxide)	338.79	--
FE BAG 2 (Bag 2 Fuel Economy)	25.81	25.81
CO2 BAG 3 (Bag 3 Carbon Dioxide)	320.97	--
FE BAG 3 (Bag 3 Fuel Economy)	27.23	27.23
METHANE (CH4 - Methane)	0.00235	--
CO (Carbon Monoxide)	0.26969	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.1419	--
DT-EER (Drive Trace Energy Economy Rating)	0.1269	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.2281	--
HCHO (Formaldehyde)	0.00014	--
MFR FE (Manufacturer Fuel Economy)	25.72	25.72
NOX (Nitrogen Oxide)	0.01753	--
HC-NM (Non-methane Hydrocarbon)	0.01413	--
NMOG (Non-methane organic gases)	0.01553	--
HC-TOTAL (Total Hydrocarbon)	0.01637	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	340	999

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
	Test Result Name	Unrounded Test Result	Verify Calculated CO2
	Carbon dioxide	339.49	--
Manufacturer Test Comments	New Macan and Macan S (facelift, new engine); FTP for 2-day evap test, E10 fuel; Porsche Test #1841332		

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
Test #	KPRX10057793	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	12/11/2018	Fuel	N/A
Fuel Batch ID	GH210	Fuel Calibration Number	14
Vehicle Class	N/A	DF Type	Mfr. Assigned
Verify Test Lab ID	MZU Weissach		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4072	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	390.14	--
FE BAG 1 (Bag 1 Fuel Economy)	22.3	22.3
CO2 BAG 2 (Bag 2 Carbon Dioxide)	349.82	--
FE BAG 2 (Bag 2 Fuel Economy)	25	25
CO2 BAG 3 (Bag 3 Carbon Dioxide)	333.87	--
FE BAG 3 (Bag 3 Fuel Economy)	26.17	26.17
METHANE (CH4 - Methane)	0.0031	--
CO (Carbon Monoxide)	0.28001	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.3304	--
DT-EER (Drive Trace Energy Economy Rating)	-0.683	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-2.4419	--
HCHO (Formaldehyde)	0.00017	--
MFR FE (Manufacturer Fuel Economy)	24.68	24.68
NOX (Nitrogen Oxide)	0.01603	--
HC-NM (Non-methane Hydrocarbon)	0.01786	--
NMOG (Non-methane organic gases)	0.01964	--
HC-TOTAL (Total Hydrocarbon)	0.02083	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	354	999

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA						
	<table border="1"> <thead> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated CO2</th> </tr> </thead> <tbody> <tr> <td>Carbon dioxide</td> <td>353.79</td> <td>--</td> </tr> </tbody> </table>	Test Result Name	Unrounded Test Result	Verify Calculated CO2	Carbon dioxide	353.79	--		
Test Result Name	Unrounded Test Result	Verify Calculated CO2							
Carbon dioxide	353.79	--							
Manufacturer Test Comments	New Macan and Macan S (facelift, new engine), FTP for ORVR evap test; E10 fuel, Porsche Test #1840571								
Test #	KPRX10057790	Test Procedure	34 - Federal fuel 3-day evap						
Exhaust Test # for this Evap Test	KPRX10057789	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)						
Test Date	12/05/2018	Fuel	Gasoline						
Fuel Batch ID	GH210	Fuel Calibration Number	14						
Vehicle Class	N/A	DF Type	Mfr. Assigned						
Verify Test Lab ID	MZU Weissach								
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)								
Test Start Odometer Reading	4065	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"> <thead> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated FE Equivalent Value (miles per gallon)</th> </tr> </thead> <tbody> <tr> <td>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</td> <td>0.45</td> <td>--</td> </tr> </tbody> </table>	Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.45	--		
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)							
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.45	--							
Manufacturer Test Comments	new Macan and Macan S (facelift, new engine); 3-day evap test, E10 fuel; Porsche test number 1839342								
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail	
Fed	120,000 miles	Federal LEV-II Evap	HC-TOTAL-EQUIV	0.450	0.065	0.52	0.65	Pass	
CA	150,000 miles	California LEV-II Evap	HC-TOTAL-EQUIV	0.450	0.065	0.52	0.65	Pass	

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
Test #	KPRX10057792	Test Procedure	23 - 2-day evap
Exhaust Test # for this Evap Test	KPRX10057791	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	12/18/2018	Fuel	Gasoline
Fuel Batch ID	GH210	Fuel Calibration Number	14
Vehicle Class	N/A	DF Type	Mfr. Assigned
Verify Test Lab ID	MZU Weissach		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	4137	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)	0.2832	--

Manufacturer Test Comments

new Macan and Macan S (facelift, new engine); 2-day evap test, E10 fuel; Porsche test number 1841335

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal LEV-II Evap	HC-TOTAL-EQUIV	0.283	0.085	0.37	0.85	Pass
CA	150,000 miles	California LEV-II Evap	HC-TOTAL-EQUIV	0.283	0.085	0.37	0.85	Pass

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA						
Test #	KPRX10057794	Test Procedure	24 - Federal fuel refueling test (ORVR)						
Exhaust Test # for this Evap Test	KPRX10057793	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)						
Test Date	12/12/2018	Fuel	Gasoline						
Fuel Batch ID	GH210	Fuel Calibration Number	14						
Vehicle Class	N/A	DF Type	Mfr. Assigned						
Verify Test Lab ID	MZU Weissach								
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)								
Test Start Odometer Reading	0	Odometer Units	M						
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--						
State of Charge Delta	--								
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No						
Test Results									
<table border="1"> <thead> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated FE Equivalent Value (miles per gallon)</th> </tr> </thead> <tbody> <tr> <td>HC (Hydrocarbon for Running Loss and ORVR)</td> <td>0.0196</td> <td>--</td> </tr> </tbody> </table>				Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	HC (Hydrocarbon for Running Loss and ORVR)	0.0196	--
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)							
HC (Hydrocarbon for Running Loss and ORVR)	0.0196	--							
Manufacturer Test Comments									
new Macan and Macan S (facelift, new engine); ORVR evap test, E10 fuel; Porsche test number 1840574									
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail	
Fed	120,000 miles	Federal LEV-II Evap	HC	0.020	0.020	0.04	0.20	Pass	
CA	150,000 miles	California LEV-II Evap	HC	0.020	0.020	0.04	0.20	Pass	

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
Test #	KPRX10057795	Test Procedure	32 - Federal Fuel Running Loss
Exhaust Test # for this Evap Test	KPRX10057789	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	12/05/2018	Fuel	Gasoline
Fuel Batch ID	GH210	Fuel Calibration Number	14
Vehicle Class	N/A	DF Type	Mfr. Assigned
Verify Test Lab ID	MZU Weissach		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	4048	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	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)	0.00054	--

Manufacturer Test Comments

new Macan and Macan S (facelift, new engine); Running Loss test, E10 fuel; Porsche test number 1839271

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal LEV-II Evap	HC-TOTAL-EQUIV	0.001	0.005	0.01	0.05	Pass
CA	150,000 miles	California LEV-II Evap	HC-TOTAL-EQUIV	0.001	0.005	0.01	0.05	Pass

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA					
Emission Data Vehicle Information								
Vehicle ID / Configuration	EC-9YA-19 / 0	Manufacturer Vehicle Configuration Number	0					
Original Test Group Name	KPRXT03.0CV6	Original Evaporative/Refueling Family	KPRXR0150RED					
Original Test Vehicle Model Year	2019							
Vehicle Model								
Represented Test Vehicle Make	Porsche	Represented Test Vehicle Model	Cayenne					
Leak Family Details								
Leak Family Identifier	--	Leak Family Name	--					
Drive Sources and Fuel System Details								
	<table border="1"> <thead> <tr> <th>Drive Source and Fuel#</th> <th>Drive Source</th> <th>Fuel</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Combustion Engine</td> <td>Gasoline</td> </tr> </tbody> </table>	Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	Gasoline	
Drive Source and Fuel#	Drive Source	Fuel						
1	Combustion Engine	Gasoline						
Hybrid Indicator	No							
Multiple Fuel Storage	--	Multiple Fuel Combustion	--					
Fuel Cell Indicator	--	Rechargeable Energy Storage System Indicator	--					
Rechargeable Energy Storage System	--	Rechargeable Energy Storage System, if 'Other'	--					
Off-board charge Capable Indicator	--							
Odometer Correction -- Initial	0	Odometer Correction Factor	0.9982					
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles							
Odometer Correction Units	Miles							
Engine Code	DCB	Rated Horsepower	332					
Displacement (liters)	3							
Air Aspiration Method	Turbocharged	Air Aspiration Method, if 'Other'						
Number of Air Aspiration Devices	1	Air Aspiration Device Configuration	Single					
Charge Air Cooler Type	Air	Drive Mode While Testing	2-Wheel Drive, Rear					
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)					
Curb Weight (lbs)	4696	Equivalent Test Weight (pounds)	5000					
GVWR (lbs)	6239	N/V Ratio	48.8					
Axle Ratio	3.21							
Transmission Type	Semi-Automatic	# of Transmission Gears	8					
Transmission Lockup	Yes	Creep Gear	No					

Certification Summary Information Report

Test Group		MPRXT03.0CV6			Evaporative/Refueling Family		MPRXR0140RMA	
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	49.458	0.71636	0.01991	49.458	0.71636	0.01991	18	
Cold CO	49.458	0.71636	0.01991	49.458	0.71636	0.01991	N/A	
US06	49.458	0.71636	0.01991	49.458	0.71636	0.01991	N/A	
Emission Control Device Comments		--						
Manufacturer Test Vehicle Comments		Evap test vehicle for base Cayenne, Cayenne S, and Cayenne Turbo						

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
Test #	KPRX10054420	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	06/08/2018	Fuel	Gasoline
Fuel Batch ID	EK1603	Fuel Calibration Number	6
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Assigned
Verify Test Lab ID	MZU Weissach		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4431	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)	
CO2 BAG 1 (Bag 1 Carbon Dioxide)	417.5	--	
FE BAG 1 (Bag 1 Fuel Economy)	21.07	21.07	
CO2 BAG 2 (Bag 2 Carbon Dioxide)	377.02	--	
FE BAG 2 (Bag 2 Fuel Economy)	23.39	23.39	
CO2 BAG 3 (Bag 3 Carbon Dioxide)	358.13	--	
FE BAG 3 (Bag 3 Fuel Economy)	24.6	24.6	
METHANE (CH4 - Methane)	0.0022	--	
CO (Carbon Monoxide)	0.3	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	2.1901	--	
DT-EER (Drive Trace Energy Economy Rating)	1.0065	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	2.86	--	
HCHO (Formaldehyde)	0.0001	--	
MFR FE (Manufacturer Fuel Economy)	23.17	23.17	
NOX (Nitrogen Oxide)	0.01705	--	
HC-NM (Non-methane Hydrocarbon)	0.0133	--	
NMOG (Non-methane organic gases)	0.01459	--	
HC-TOTAL (Total Hydrocarbon)	0.01543	--	
Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE	
Carbon-Related Exhaust Emissions	381	999	

Certification Summary Information Report

Test Group		MPRXT03.0CV6			Evaporative/Refueling Family				MPRXR0140RMA			
		Test Result Name		Unrounded Test Result			Verify Calculated CO2					
		Carbon dioxide		380.23			--					
Manufacturer Test Comments		New Cayenne ("E3" platform), FTP for evap tests; E10, Porsche Test #1818797										
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	METHANE	0.0022	--	--	--	0.0034	--	0.006	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	CO	0.30	--	--	--	0.26	--	0.6	1.7	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	CREE	999	--	--	--	0.43	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 70	HCHO	0.0001	--	--	--	0.0000	--	0.000	0.004	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG	0.0146	--	1.10	--	0.0082	--	0.023	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.0316	--	1.10	--	--	--	0.056	0.070	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.0170	--	--	--	0.0160	--	0.033	999.999	Pass
CA	120,000 miles	California LEV-III ULEV70	METHANE	0.0022	--	--	--	0.0034	--	0.006	0.030	Pass
CA	150,000 miles	California LEV-III ULEV70	CO	0.30	--	--	--	0.26	--	0.6	1.7	Pass
CA	150,000 miles	California LEV-III ULEV70	HCHO	0.0001	--	--	--	0.0000	--	0.000	.004	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0146	--	1.10	--	0.0082	--	0.023	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0316	--	1.10	--	--	--	0.056	0.070	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0170	--	--	--	0.0160	--	0.033	999.999	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	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
Test #	KPRX91004096	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	10/24/2018	Fuel	Gasoline
Fuel Batch ID	26596	Fuel Calibration Number	2
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Assigned
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4641	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)	
CO2 BAG 1 (Bag 1 Carbon Dioxide)	414.1291082	--	
FE BAG 1 (Bag 1 Fuel Economy)	999	--	
CO2 BAG 2 (Bag 2 Carbon Dioxide)	387.7855861	--	
FE BAG 2 (Bag 2 Fuel Economy)	999	--	
CO2 BAG 3 (Bag 3 Carbon Dioxide)	370.8945705	--	
FE BAG 3 (Bag 3 Fuel Economy)	999	--	
METHANE (CH4 - Methane)	0.0036511	--	
CO (Carbon Monoxide)	0.285183	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	2.060133	--	
DT-EER (Drive Trace Energy Economy Rating)	0.954863	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	2.986753	--	
MFR FE (Manufacturer Fuel Economy)	999	--	
NOX (Nitrogen Oxide)	0.014333	--	
HC-NM (Non-methane Hydrocarbon)	0.0175624	--	
NMOG (Non-methane organic gases)	0.019326	--	
HC-TOTAL (Total Hydrocarbon)	0.0206742	--	
Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE	
Carbon-Related Exhaust Emissions	0	999	

Certification Summary Information Report

Test Group		MPRXT03.0CV6			Evaporative/Refueling Family				MPRXR0140RMA			
		Test Result Name		Unrounded Test Result			Verify Calculated CO2					
		Carbon dioxide		388.6038907			--					
Manufacturer Test Comments		NMOG=1.100 x NMHC TC N2O Not Measured. OPT-CREE not determined. CREE calculated. Unrounded Result for the following test results were modified by Verify: FE BAG 2, FE BAG 1, MFR FE, FE BAG 3										
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	METHANE	0.0037	--	--	--	0.0034	--	0.007	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	CO	0.29	--	--	--	0.26	--	0.6	1.7	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	CREE	999	--	--	--	0.43	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG	0.0193	--	1.10	--	0.0082	--	0.028	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.0336	--	1.10	--	--	--	0.058	0.070	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.0143	--	--	--	0.0160	--	0.030	999.999	Pass
CA	120,000 miles	California LEV-III ULEV70	METHANE	0.0037	--	--	--	0.0034	--	0.007	0.030	Pass
CA	150,000 miles	California LEV-III ULEV70	CO	0.29	--	--	--	0.26	--	0.6	1.7	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0193	--	1.10	--	0.0082	--	0.028	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0336	--	1.10	--	--	--	0.058	0.070	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0143	--	--	--	0.0160	--	0.030	999.999	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	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA					
Emission Data Vehicle Information								
Vehicle ID / Configuration	ECFE-9YAS-19 / 0	Manufacturer Vehicle Configuration Number	0					
Original Test Group Name	KPRXT03.0CV6	Original Evaporative/Refueling Family	KPRXR0150RED					
Original Test Vehicle Model Year	2019							
Vehicle Model								
Represented Test Vehicle Make	Porsche	Represented Test Vehicle Model	Cayenne S					
Leak Family Details								
Leak Family Identifier	--	Leak Family Name	--					
Drive Sources and Fuel System Details								
	<table border="1"> <thead> <tr> <th>Drive Source and Fuel#</th> <th>Drive Source</th> <th>Fuel</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Combustion Engine</td> <td>Gasoline</td> </tr> </tbody> </table>	Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	Gasoline	
Drive Source and Fuel#	Drive Source	Fuel						
1	Combustion Engine	Gasoline						
Hybrid Indicator	No							
Multiple Fuel Storage	--	Multiple Fuel Combustion	--					
Fuel Cell Indicator	--	Rechargeable Energy Storage System Indicator	--					
Rechargeable Energy Storage System	--	Rechargeable Energy Storage System, if 'Other'	--					
Off-board charge Capable Indicator	--							
Odometer Correction -- Initial	0	Odometer Correction Factor	0.9867					
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles							
Odometer Correction Units	Miles							
Engine Code	DCA	Rated Horsepower	434					
Displacement (liters)	2.9							
Air Aspiration Method	Turbocharged	Air Aspiration Method, if 'Other'						
Number of Air Aspiration Devices	2	Air Aspiration Device Configuration	Parallel					
Charge Air Cooler Type	Air	Drive Mode While Testing	2-Wheel Drive, Rear					
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)					
Curb Weight (lbs)	4892	Equivalent Test Weight (pounds)	5250					
GVWR (lbs)	6261	N/V Ratio	48.8					
Axle Ratio	3.21							
Transmission Type	Semi-Automatic	# of Transmission Gears	8					
Transmission Lockup	Yes	Creep Gear	No					

Certification Summary Information Report

Test Group		MPRXT03.0CV6			Evaporative/Refueling Family		MPRXR0140RMA	
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	55.078	0.71635	0.0202	55.078	0.71635	0.0202	18.9	
Cold CO	55.078	0.71635	0.0202	55.078	0.71635	0.0202	N/A	
US06	55.078	0.71635	0.0202	55.078	0.71635	0.0202	N/A	
Emission Control Device Comments		2WU-TWC/MAP/DFI/2WR-HO2S/2HO2S/2TC/2CAC						
Manufacturer Test Vehicle Comments		Test Vehicle for Fuel Economy and Emissions; Cayenne S model; Porsche internal test vehicle number SEP654; 2nd correction: add decimal place to axle ratio; Auto mode; No downshifts; No sport button usage. User-selectable transmission includes Drive, Sport, and Sport Plus modes. EDV testing performed in Drive mode.						

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
Test #	KPRX10054031	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	02/02/2018	Fuel	Gasoline
Fuel Batch ID	EK1603	Fuel Calibration Number	6
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Assigned
Verify Test Lab ID	MZU Weissach		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4355	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)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	411.63	--
FE BAG 1 (Bag 1 Fuel Economy)	21.39	21.39
CO2 BAG 2 (Bag 2 Carbon Dioxide)	388.28	--
FE BAG 2 (Bag 2 Fuel Economy)	22.72	22.72
CO2 BAG 3 (Bag 3 Carbon Dioxide)	361.97	--
FE BAG 3 (Bag 3 Fuel Economy)	24.35	24.35
METHANE (CH4 - Methane)	0.002	--
CO (Carbon Monoxide)	0.15148	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.876	--
DT-EER (Drive Trace Energy Economy Rating)	0.15	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.9343	--
HCHO (Formaldehyde)	0.0001	--
MFR FE (Manufacturer Fuel Economy)	22.85	22.85
NOX (Nitrogen Oxide)	0.01986	--
HC-NM (Non-methane Hydrocarbon)	0.01482	--
NMOG (Non-methane organic gases)	0.01627	--
PM (Particulate Matter)	0.00075	--
HC-TOTAL (Total Hydrocarbon)	0.0171	--

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
	Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
	Carbon-Related Exhaust Emissions	386	999
	Test Result Name	Unrounded Test Result	Verify Calculated CO2
	Carbon dioxide	385.9	--
Manufacturer Test Comments	New Cayenne and Cayenne S ("E3" platform); FTP, E10, Porsche Test #1805389; correction to add PM		

Certification Summary Information Report

Test Group		MPRXT03.0CV6			Evaporative/Refueling Family					MPRXR0140RMA		
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	METHANE	0.0020	--	--	--	0.0034	--	0.005	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	CO	0.15	--	--	--	0.26	--	0.4	1.7	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	CO-COMP	0.57	--	--	--	0.26	--	0.6	4.2	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	CREE	999	--	--	--	0.43	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 70	HCHO	0.0001	--	--	--	0.0000	--	0.000	0.004	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG	0.0163	--	1.10	--	0.0082	--	0.024	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.0362	--	1.10	--	--	--	0.060	0.070	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX-COMP	0.0465	--	1.10	--	0.0242	--	0.046	0.080	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.0199	--	--	--	0.0160	--	0.036	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	PM	0.0008	--	--	--	0.0000	--	0.001	0.003	Pass
CA	120,000 miles	California LEV-III ULEV70	METHANE	0.0020	--	--	--	0.0034	--	0.005	0.030	Pass
CA	150,000 miles	California LEV-III ULEV70	CO	0.15	--	--	--	0.26	--	0.4	1.7	Pass
CA	150,000 miles	California LEV-III ULEV70	CO-COMP	0.57	--	--	--	0.26	--	0.6	4.2	Pass
CA	150,000 miles	California LEV-III ULEV70	HCHO	0.0001	--	--	--	0.0000	--	0.000	.004	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0163	--	1.10	--	0.0082	--	0.024	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0362	--	1.10	--	--	--	0.060	0.070	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX-COMP	0.0465	--	1.10	--	0.0242	--	0.046	0.080	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0199	--	--	--	0.0160	--	0.036	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	PM	0.0008	--	--	--	0.0000	--	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	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
Test #	KPRX10054034	Test Procedure	11 - Cold CO
Exhaust Test # for this Evap Test	--	Test Fuel Type	29 - Cold CO E10 Premium Gasoline (Tier 3)
Test Date	03/06/2018	Fuel	Gasoline
Fuel Batch ID	FH0303	Fuel Calibration Number	10
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Assigned
Verify Test Lab ID	MZU Weissach		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4481	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)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	553.08	--
FE BAG 1 (Bag 1 Fuel Economy)	15.71	15.71
CO2 BAG 2 (Bag 2 Carbon Dioxide)	456.95	--
FE BAG 2 (Bag 2 Fuel Economy)	19.12	19.12
CO2 BAG 3 (Bag 3 Carbon Dioxide)	396.22	--
FE BAG 3 (Bag 3 Fuel Economy)	22.03	22.03
METHANE (CH4 - Methane)	0.0089	--
CO (Carbon Monoxide)	0.36231	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.335	--
DT-EER (Drive Trace Energy Economy Rating)	0.8407	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.888	--
HCHO (Formaldehyde)	0.0006	--
MFR FE (Manufacturer Fuel Economy)	18.96	18.96
NOX (Nitrogen Oxide)	0.01654	--
N2O (Nitrous Oxide)	0.00046	--
HC-NM (Non-methane Hydrocarbon)	0.06017	--
NMOG (Non-methane organic gases)	0.0663	--
PM (Particulate Matter)	0.00986	--
HC-TOTAL (Total Hydrocarbon)	0.06859	--

Certification Summary Information Report

Test Group		MPRXT03.0CV6				Evaporative/Refueling Family				MPRXR0140RMA		
		Test Result Name		Unrounded Test Result		Verify Calculated CREE/OPT-CREE						
		Carbon-Related Exhaust Emissions		461		--						
		Test Result Name		Unrounded Test Result		Verify Calculated CO2						
		Carbon dioxide		460.19		--						
Manufacturer Test Comments		New Cayenne and Cayenne S ("E3" platform); Cold CO for certification; E10 Low T fuel; Porsche internal test vehicle name SEP654; Porsche Test Num 1806986										
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	0.36	--	--	--	0.26	--	0.6	12.5	Pass
Fed	120,000 miles	Federal Tier 3 Bin 70	HC-NM	0.06	--	--	--	0.01	--	0.1	0.3	Pass
CA	50,000 miles	California LEV-III ULEV70	CO	0.36	--	--	--	0.26	--	0.6	12.5	Pass
CA	120,000 miles	California LEV-III ULEV70	HC-NM	0.06	--	--	--	0.01	--	0.1	0.3	Pass

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
Test #	KPRX10054201	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	05/04/2018	Fuel	Gasoline
Fuel Batch ID	PUTG96	Fuel Calibration Number	456
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Assigned
Verify Test Lab ID	MZU Weissach		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4619	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)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	416.59	--
FE BAG 1 (Bag 1 Fuel Economy)	21.1	21.1
CO2 BAG 2 (Bag 2 Carbon Dioxide)	383.83	--
FE BAG 2 (Bag 2 Fuel Economy)	23	23
CO2 BAG 3 (Bag 3 Carbon Dioxide)	368.64	--
FE BAG 3 (Bag 3 Fuel Economy)	23.93	23.93
METHANE (CH4 - Methane)	0.0036	--
CO (Carbon Monoxide)	0.25633	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.5954	--
DT-EER (Drive Trace Energy Economy Rating)	-1.3481	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.317	--
HCHO (Formaldehyde)	0.0002	--
MFR FE (Manufacturer Fuel Economy)	22.82	22.82
NOX (Nitrogen Oxide)	0.01815	--
N2O (Nitrous Oxide)	0.00061	--
HC-NM (Non-methane Hydrocarbon)	0.02326	--
NMOG (Non-methane organic gases)	0.02419	--
PM (Particulate Matter)	0.00082	--
HC-TOTAL (Total Hydrocarbon)	0.02665	--

Certification Summary Information Report

Test Group		MPRXT03.0CV6			Evaporative/Refueling Family				MPRXR0140RMA			
		Test Result Name		Unrounded Test Result		Verify Calculated CREE/OPT-CREE						
		Carbon-Related Exhaust Emissions		387		386						
		Test Result Name		Unrounded Test Result		Verify Calculated CO2						
		Carbon dioxide		386.45		--						
Manufacturer Test Comments		New Cayenne S ("E3" platform), for Fuel Economy; FTP, E0, Porsche Test #1814157; correction to add N2O and PM results										
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	METHANE	0.0036	--	--	--	0.0034	--	0.007	0.030	Pass
Fed	120,000 miles	Federal Tier 3 Bin 70	N2O	0.0006	--	--	--	0.0010	--	0.002	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	CO	0.26	--	--	--	0.26	--	0.5	1.7	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	CREE	386	--	--	--	0.43	--	386	--	--
Fed	150,000 miles	Federal Tier 3 Bin 70	HCHO	0.0002	--	--	--	0.0000	--	0.000	0.004	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG	0.0242	--	1.10	--	0.0082	--	0.032	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.0424	--	1.10	--	--	--	0.067	0.070	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.0182	--	--	--	0.0160	--	0.034	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	PM	0.0008	--	--	--	0.0000	--	0.001	0.003	Pass
CA	120,000 miles	California LEV-III ULEV70	METHANE	0.0036	--	--	--	0.0034	--	0.007	0.030	Pass
CA	120,000 miles	California LEV-III ULEV70	N2O	0.0006	--	--	--	0.0010	--	0.002	0.010	Pass
CA	150,000 miles	California LEV-III ULEV70	CO	0.26	--	--	--	0.26	--	0.5	1.7	Pass
CA	150,000 miles	California LEV-III ULEV70	HCHO	0.0002	--	--	--	0.0000	--	0.000	.004	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0242	--	1.10	--	0.0082	--	0.032	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0424	--	1.10	--	--	--	0.067	0.070	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0182	--	--	--	0.0160	--	0.034	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	PM	0.0008	--	--	--	0.0000	--	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	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
Test #	KPRX10054032	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	02/02/2018	Fuel	Gasoline
Fuel Batch ID	EK1603	Fuel Calibration Number	6
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Assigned
Verify Test Lab ID	MZU Weissach		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4366	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)
CO (Carbon Monoxide)	0.1019	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	2.762	--
DT-EER (Drive Trace Energy Economy Rating)	-0.2002	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	3.063	--
MFR FE (Manufacturer Fuel Economy)	31.95	31.95
NOX (Nitrogen Oxide)	0.003	--
HC-NM (Non-methane Hydrocarbon)	0.0005	--
NMOG (Non-methane organic gases)	0.0005	--
HC-TOTAL (Total Hydrocarbon)	0.0005	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	276	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	276	--

Manufacturer Test Comments New Cayenne and Cayenne S ("E3" platform); Highway, E10 fuel, Porsche internal test name SEP654; Porsche test # 1805444

Certification Summary Information Report

Test Group		MPRXT03.0CV6				Evaporative/Refueling Family				MPRXR0140RMA		
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	CREE	999	--	--	--	0.43	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG	0.0005	--	1.04	--	0.0082	--	0.009	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.0035	--	1.04	--	--	--	0.028	0.070	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.0030	--	--	--	0.0160	--	0.019	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0005	--	1.04	--	0.0082	--	0.009	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0035	--	1.04	--	--	--	0.028	0.070	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0030	--	--	--	0.0160	--	0.019	999.999	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	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
Test #	KPRX10054203	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline
Test Date	05/04/2018	Fuel	Gasoline
Fuel Batch ID	PUTG96	Fuel Calibration Number	456
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Assigned
Verify Test Lab ID	MZU Weissach		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4630	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)
CO (Carbon Monoxide)	0.18828	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-3.4034	--
DT-EER (Drive Trace Energy Economy Rating)	-0.76726	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-4.0303	--
MFR FE (Manufacturer Fuel Economy)	31.6	31.6
NOX (Nitrogen Oxide)	0.00204	--
HC-NM (Non-methane Hydrocarbon)	0.00815	--
NMOG (Non-methane organic gases)	0.0085	--
HC-TOTAL (Total Hydrocarbon)	0.01064	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	279	279

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	279.1	--

Manufacturer Test Comments

New Cayenne S ("E3" platform); Highway test for Fuel Economy, E0 fuel, Porsche test # 1814159

Certification Summary Information Report

Test Group		MPRXT03.0CV6				Evaporative/Refueling Family				MPRXR0140RMA		
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	CREE	279	--	--	--	0.43	--	279	--	--
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG	0.0085	--	1.04	--	0.0082	--	0.017	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.0105	--	1.04	--	--	--	0.035	0.070	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.0020	--	--	--	0.0160	--	0.018	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0085	--	1.04	--	0.0082	--	0.017	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG+NOX	0.0105	--	1.04	--	--	--	0.035	0.070	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0020	--	--	--	0.0160	--	0.018	999.999	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	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
Test #	KPRX10054033	Test Procedure	90 - US06
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	02/02/2018	Fuel	Gasoline
Fuel Batch ID	EK1603	Fuel Calibration Number	6
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Assigned
Verify Test Lab ID	MZU Weissach		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4389	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)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	675.52	--
FE BAG 1 (Bag 1 Fuel Economy)	13.04	13.04
CO2 BAG 2 (Bag 2 Carbon Dioxide)	364.81	--
FE BAG 2 (Bag 2 Fuel Economy)	24.09	24.09
METHANE (CH4 - Methane)	0.0033	--
CO (Carbon Monoxide)	0.85291	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.013	--
DT-EER (Drive Trace Energy Economy Rating)	0.0363	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-2.037	--
HCHO (Formaldehyde)	0.0001	--
MFR FE (Manufacturer Fuel Economy)	20.29	20.29
NOX (Nitrogen Oxide)	0.00834	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0.00565	--
NMOG (Non-methane organic gases)	0.00582	--
PM (Particulate Matter)	0.00014	--
HC-TOTAL (Total Hydrocarbon)	0.00881	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	435	--

Certification Summary Information Report

Test Group		MPRXT03.0CV6			Evaporative/Refueling Family				MPRXR0140RMA			
		Test Result Name		Unrounded Test Result			Verify Calculated CO2					
		Carbon dioxide		433.52			--					
Manufacturer Test Comments		New Cayenne and Cayenne S ("E3" platform); US06 for certification; E10 fuel; Porsche internal test vehicle name SEP654; Porsche Test No. 1805446										
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	0.85	--	--	--	0.26	--	1.1	999.9	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG	0.0058	--	1.03	--	0.0082	--	0.014	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.008	--	--	--	0.0160	--	0.02	999.99	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	PM	0.0001	--	--	--	0.000	--	0.000	0.006	Pass
CA	150,000 miles	California LEV-III ULEV70	CO	0.85	--	--	--	0.26	--	1.1	999.9	Pass
CA	150,000 miles	California LEV-III ULEV70	NMOG	0.0058	--	1.03	--	0.0082	--	0.014	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0083	--	--	--	0.0160	--	0.024	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	PM	0.0001	--	--	--	0.0000	--	0.000	0.006	Pass

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
Test #	KPRX10054035	Test Procedure	95 - SC03
Exhaust Test # for this Evap Test	--	Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	03/09/2018	Fuel	Gasoline
Fuel Batch ID	Audi17	Fuel Calibration Number	1
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)	DF Type	Mfr. Assigned
Verify Test Lab ID	MZU Weissach		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4527	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)
METHANE (CH4 - Methane)	0.0017	--
CO (Carbon Monoxide)	0.0363	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.88	--
DT-EER (Drive Trace Energy Economy Rating)	-0.63	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.47	--
MFR FE (Manufacturer Fuel Economy)	18.95	18.95
NOX (Nitrogen Oxide)	0.0154	--
HC-NM (Non-methane Hydrocarbon)	0	--
PM (Particulate Matter)	0.0005	--
HC-TOTAL (Total Hydrocarbon)	0.0014	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	463	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	462.99	--

Manufacturer Test Comments

SC03 for certification; new Cayenne and Cayenne S ("E3" platform); E10 fuel; Porsche internal test vehicle name SEP654; Porsche Test No. ING-08-20180309-18

Certification Summary Information Report

Test Group		MPRXT03.0CV6				Evaporative/Refueling Family				MPRXR0140RMA		
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	0.04	--	--	--	0.26	--	0.3	999.9	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.0154	--	--	--	0.0160	--	0.031	999.999	Pass
CA	150,000 miles	California LEV-III ULEV70	CO	0.04	--	--	--	0.26	--	0.3	999.9	Pass
CA	150,000 miles	California LEV-III ULEV70	NOX	0.0154	--	--	--	0.0160	--	0.031	999.999	Pass

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
Fuel Properties			
Fuel Batch ID	GH210	Fuel Calibration Number	14
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	07/18/2018
Fuel Batch Calibration Effective Date	07/18/2018	Fuel Batch Calibration Ineffective Date	07/31/2024
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.752
Fuel Ethanol Volume Percent (%)	9.8	Fuel Net Heating Value (BTU / lb)	17855
Fuel Blend Carbon Weight Fraction	0.83	Weight Fraction CO2	--
Fuel Batch ID	FH0303	Fuel Calibration Number	10
Test Fuel Type	29 - Cold CO E10 Premium Gasoline (Tier 3)	Fuel Batch Calibration Date	08/03/2017
Fuel Batch Calibration Effective Date	08/03/2017	Fuel Batch Calibration Ineffective Date	12/31/2022
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.749
Fuel Ethanol Volume Percent (%)	10.1	Fuel Net Heating Value (BTU / lb)	17756
Fuel Blend Carbon Weight Fraction	0.828	Weight Fraction CO2	--
Fuel Batch ID	26596	Fuel Calibration Number	2
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	05/10/2017
Fuel Batch Calibration Effective Date	05/10/2017	Fuel Batch Calibration Ineffective Date	05/10/2032
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.743
Fuel Ethanol Volume Percent (%)	9.9	Fuel Net Heating Value (BTU / lb)	18010
Fuel Blend Carbon Weight Fraction	0.823	Weight Fraction CO2	--
Fuel Batch ID	EK1603	Fuel Calibration Number	6
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	12/26/2016
Fuel Batch Calibration Effective Date	12/30/2016	Fuel Batch Calibration Ineffective Date	12/31/2018
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.76
Fuel Ethanol Volume Percent (%)	9.5	Fuel Net Heating Value (BTU / lb)	17785
Fuel Blend Carbon Weight Fraction	0.832	Weight Fraction CO2	--
Fuel Batch ID	Audi17	Fuel Calibration Number	1

Certification Summary Information Report

Test Group	MPRXT03.0CV6	Evaporative/Refueling Family	MPRXR0140RMA
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	07/31/2017
Fuel Batch Calibration Effective Date	07/31/2017	Fuel Batch Calibration Ineffective Date	12/31/2018
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.76
Fuel Ethanol Volume Percent (%)	9.8	Fuel Net Heating Value (BTU / lb)	17785
Fuel Blend Carbon Weight Fraction	0.832	Weight Fraction CO2	--
Fuel Batch ID	PUTG96	Fuel Calibration Number	456
Test Fuel Type	61 - Tier 2 Cert Gasoline	Fuel Batch Calibration Date	05/27/2016
Fuel Batch Calibration Effective Date	06/01/2016	Fuel Batch Calibration Ineffective Date	12/31/2017
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.737
Fuel Ethanol Volume Percent (%)	--	Fuel Net Heating Value (BTU / lb)	18495
Fuel Blend Carbon Weight Fraction	0.863	Weight Fraction CO2	--

Certification Summary Information Report

Test Group		MPRXT03.0CV6			Evaporative/Refueling Family			MPRXR0140RMA	
Consolidated List of Standards									
Exhaust Standards									
Cert Region		Federal			Cert/In-Use Code			Cert	
Vehicle Class		LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)			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	METHANE	--	--	--	--	--	--	0.0034	0.030
120,000 miles	N2O	--	--	--	--	--	--	0.0010	0.010
150,000 miles	CO	--	--	--	--	--	--	0.26	1.7
150,000 miles	CO-COMP	--	--	--	--	--	--	0.26	4.2
150,000 miles	CREE	--	--	--	--	--	--	0.43	999.9
150,000 miles	HCHO	--	--	--	--	--	--	0.0000	0.004
150,000 miles	NMOG	--	--	1.10	--	--	--	0.0082	999.999
150,000 miles	NMOG+NOX	--	--	1.10	--	--	--	0.0242	0.070
150,000 miles	NMOG+NOX-COMP	--	--	1.10	--	--	--	0.0242	0.080
150,000 miles	NOX	--	--	--	--	--	--	0.0160	999.999
150,000 miles	PM	--	--	--	--	--	--	0.0000	0.003
Cert Region		Federal			Cert/In-Use Code			Cert	
Vehicle Class		LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)			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
150,000 miles	CREE	--	--	--	--	--	--	0.43	999.9
150,000 miles	NMOG	--	--	1.04	--	--	--	0.0082	999.999
150,000 miles	NMOG+NOX	--	--	1.04	--	--	--	0.0242	0.070
150,000 miles	NOX	--	--	--	--	--	--	0.0160	999.999

Certification Summary Information Report

Test Group		MPRXT03.0CV6			Evaporative/Refueling Family			MPRXR0140RMA	
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert	
Vehicle Class		LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)			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
120,000 miles	METHANE	--	--	--	--	--	--	0.0034	0.030
120,000 miles	N2O	--	--	--	--	--	--	0.0010	0.010
150,000 miles	CO	--	--	--	--	--	--	0.26	1.7
150,000 miles	CO-COMP	--	--	--	--	--	--	0.26	4.2
150,000 miles	HCHO	--	--	--	--	--	--	0.0000	.004
150,000 miles	NMOG	--	--	1.10	--	--	--	0.0082	999.999
150,000 miles	NMOG+NOX	--	--	1.10	--	--	--	0.0242	0.070
150,000 miles	NMOG+NOX-COMP	--	--	1.10	--	--	--	0.0242	0.080
150,000 miles	NOX	--	--	--	--	--	--	0.0160	999.999
150,000 miles	PM	--	--	--	--	--	--	0.0000	0.003

Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert	
Vehicle Class		LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)			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	--	--	--	--	--	--	0.26	999.9
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0082	999.999
150,000 miles	NOX	--	--	--	--	--	--	0.0160	999.999
150,000 miles	PM	--	--	--	--	--	--	0.0000	0.006

Certification Summary Information Report

Test Group	MPRXT03.0CV6			Evaporative/Refueling Family			MPRXR0140RMA		
Cert Region	Federal			Cert/In-Use Code			Cert		
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)			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	--	--	--	--	--	--	0.26	999.9
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0082	999.999
150,000 miles	NOX	--	--	--	--	--	--	0.0160	999.99
150,000 miles	PM	--	--	--	--	--	--	0.000	0.006

Cert Region	Federal			Cert/In-Use Code			Cert		
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)			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	--	--	--	--	--	--	0.26	999.9
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0082	999.999
150,000 miles	NOX	--	--	--	--	--	--	0.0160	999.999

Cert Region	California + CAA Section 177 states			Cert/In-Use Code			Cert		
Vehicle Class	LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)			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	--	--	--	--	--	--	0.26	999.9
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0082	999.999
150,000 miles	NOX	--	--	--	--	--	--	0.0160	999.999

Certification Summary Information Report

Test Group		MPRXT03.0CV6			Evaporative/Refueling Family			MPRXR0140RMA	
Cert Region		Federal			Cert/In-Use Code			Cert	
Vehicle Class		LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)			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	--	--	--	--	--	--	0.26	12.5
120,000 miles	HC-NM	--	--	--	--	--	--	0.01	0.3
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert	
Vehicle Class		LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)			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	--	--	--	--	--	--	0.26	12.5
120,000 miles	HC-NM	--	--	--	--	--	--	0.01	0.3
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert	
Vehicle Class		LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000)			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	--	--	1.04	--	--	--	0.0082	999.999
150,000 miles	NMOG+NOX	--	--	1.04	--	--	--	0.0242	0.070
150,000 miles	NOX	--	--	--	--	--	--	0.0160	999.999
Evaporative/Refueling Standards									
Evaporative/Refueling Family		MPRXR0140RMA			Cert Region			Federal	
Cert/In-Use Code		Cert			Standard Level			Federal LEV-II Evap	
Test Procedure		2-day evap							
Fuel	Useful Life	Emission Name		Rounded Result		Std		Add DF	
Gasoline	120,000 miles	HC-TOTAL-EQUIV		--		0.85		0.085	

Certification Summary Information Report

Test Group		MPRXT03.0CV6		Evaporative/Refueling Family		MPRXR0140RMA	
Evaporative/Refueling Family		MPRXR0140RMA		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		Standard Level		California LEV-II Evap	
Test Procedure		Federal Fuel Running Loss					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.05	0.005		
Evaporative/Refueling Family		MPRXR0140RMA		Cert Region		Federal	
Cert/In-Use Code		Cert		Standard Level		Federal LEV-II Evap	
Test Procedure		Federal fuel 3-day evap					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	120,000 miles	HC-TOTAL-EQUIV	--	0.65	0.065		
Evaporative/Refueling Family		MPRXR0140RMA		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		Standard Level		California LEV-II Evap	
Test Procedure		2-day evap					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.85	0.085		
Evaporative/Refueling Family		MPRXR0140RMA		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		Standard Level		California LEV-II Evap	
Test Procedure		Federal fuel refueling test (ORVR)					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC	--	0.20	0.020		
Evaporative/Refueling Family		MPRXR0140RMA		Cert Region		Federal	
Cert/In-Use Code		Cert		Standard Level		Federal LEV-II Evap	
Test Procedure		Federal fuel refueling test (ORVR)					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	120,000 miles	HC	--	0.20	0.020		
Evaporative/Refueling Family		MPRXR0140RMA		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		Standard Level		California LEV-II Evap	
Test Procedure		Federal fuel 3-day evap					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.65	0.065		

Certification Summary Information Report

Test Group		MPRXT03.0CV6		Evaporative/Refueling Family		MPRXR0140RMA	
Evaporative/Refueling Family		MPRXR0140RMA		Cert Region		Federal	
Cert/In-Use Code		Cert		Standard Level		Federal LEV-II Evap	
Test Procedure		Federal Fuel Running Loss					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	120,000 miles	HC-TOTAL-EQUIV	--	0.05	0.005		

Certification Summary Information Report

Test Group		MPRXT03.0CV6	Evaporative/Refueling Family		MPRXR0140RMA
Glossary					
Useful Life					
4	4,000 miles		120	120,000 miles	
50	50,000 miles		150	150,000 miles	
100	100,000 miles				
Emission Name					
HC-TOTAL	Total Hydrocarbon		METHANOL	CH3OH - Methanol	
CO	Carbon Monoxide		N2O	Nitrous Oxide	
CO2	Carbon dioxide		SPITBACK	Spitback Hydrocarbon in grams	
CREE	Carbon-Related Exhaust Emissions		AMP-HRS	Integrated Amp-hours	
OPT-CREE	Optional Carbon-Related Exhaust Emissions		START-SOC	System Start State of Charge Watt-hours	
NOX	Nitrogen Oxide		END-SOC	System End State of Charge Watt-hours	
PM	Particulate Matter		ACT-DISTANCE	Actual Distance Driven (miles)	
PM-COMP	SFTP Composite Particulate Matter		AS-VOLT	Average System Voltage	
HC-NM	Non-methane Hydrocarbon		CO2 BAG 1	Bag 1 Carbon Dioxide	
OMHCE	Organic material Hydrocarbon Equivalent		CO2 BAG 2	Bag 2 Carbon Dioxide	
OMNMHCE	Organic material non-methane HC equivalent		CO2 BAG 3	Bag 3 Carbon Dioxide	
NMOG	Non-methane organic gases		CO2 BAG 4	Bag 4 Carbon Dioxide	
HCHO	Formaldehyde		NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides	
H3C2HO	Acetaldehyde		NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides	
HC-NM+NOX	SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03		DT-IWRR	Drive Trace Inertia Work Ratio Rating	
HC-NM+NOX-COMP	SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides		DT-ASCR	Drive Trace Absolute Speed Change Rating	
CO-COMP	SFTP Composite Carbon Monoxide		DT-EER	Drive Trace Energy Economy Rating	
ETHANOL	C2H5OH - Ethanol		COMB-CREE	Combined Carbon-Related Exhaust Emissions	
FE BAG 1	Bag 1 Fuel Economy		COMB-OPT-CREE	Combined Optional Carbon-Related Exhaust Emissions	
FE BAG 2	Bag 2 Fuel Economy		HC-TOTAL-EQUIV	Total Hydrocarbon equivalent - Evap only	
FE BAG 3	Bag 3 Fuel Economy		METHANE-COMB	Combined CH4 for HD 2b/3 vehicles only	
FE BAG 4	Bag 4 Fuel Economy		N2O-COMB	Combined Nitrous Oxide for HD 2b/3 vehicles only	
MFR FE	Manufacturer Fuel Economy		LEAK-DIA	Effective Leak Diameter (inches)	
HC	Hydrocarbon for Running Loss and ORVR		LEAK-GAS CAP	Gas Cap Leakage (cc/min)	
METHANE	CH4 - Methane		CO2-COMB	Combined Carbon Dioxide for HD 2b/3 Vehicles Only	
Certification Region					
CA	California + CAA Section 177 states		FA	Federal	
Exhaust Emission Standard Level					
B1	Federal Tier 2 Bin 1		L3ULEV340	California LEV-III ULEV340	
B2	Federal Tier 2 Bin 2		L3ULEV250	California LEV-III ULEV250	
B3	Federal Tier 2 Bin 3		L3ULEV200	California LEV-III ULEV200	
B4	Federal Tier 2 Bin 4		L3SULEV170	California LEV-III SULEV170	
B5	Federal Tier 2 Bin 5		L3SULEV150	California LEV-III SULEV150	

Certification Summary Information Report

Test Group		MPRXT03.0CV6	Evaporative/Refueling Family		MPRXR0140RMA
B6	Federal Tier 2 Bin 6		L3LEV630	California LEV-III LEV630	
B7	Federal Tier 2 Bin 7		L3ULEV570	California LEV-III ULEV570	
B8	Federal Tier 2 Bin 8		L3ULEV400	California LEV-III ULEV400	
B9	Federal Tier 2 Bin 9		L3ULEV270	California LEV-III ULEV270	
B10	Federal Tier 2 Bin 10		L3SULEV230	California LEV-III SULEV230	
B11	Federal Tier 2 Bin 11		L3SULEV200	California LEV-III SULEV200	
HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)		T3B160	Federal Tier 3 Bin 160	
HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)		T3B125	Federal Tier 3 Bin 125	
L2	California LEV-II LEV		T3B110	Federal Tier 3 Transitional Bin 110	
L2OP	California LEV-II LEV Optional		T3B85	Federal Tier 3 Transitional Bin 85	
U2	California LEV-II ULEV		T3SULEV30	Federal Tier 3 Transitional LEV-II SULEV30 Carryover	
S2	California LEV-II SULEV		T3B70	Federal Tier 3 Bin 70	
ZEV	California ZEV		T3B50	Federal Tier 3 Bin 50	
OT	Other		T3B30	Federal Tier 3 Bin 30	
T1	Federal Tier 1		T3B20	Federal Tier 3 Bin 20	
PZEV	California PZEV		T3B0	Federal Tier 3 Bin 0	
L2LEV160	California LEV-II LEV160		HDV2B395	Federal Tier 3 HD Class 2b Transitional Bin 395	
L2ULEV125	California LEV-II ULEV125		HDV2B340	Federal Tier 3 HD Class 2b Transitional Bin 340	
L2SULEV30	California LEV-II SULEV30		HDV2B250	Federal Tier 3 HD Class 2b Bin 250	
L2LEV395	California LEV-II LEV395		HDV2B200	Federal Tier 3 HD Class 2b Bin 200	
L2ULEV340	California LEV-II ULEV340		HDV2B170	Federal Tier 3 HD Class 2b Bin 170	
L2LEV630	California LEV-II LEV630		HDV2B150	Federal Tier 3 HD Class 2b Bin 150	
L2ULEV570	California LEV-II ULEV570		HDV2B0	Federal Tier 3 HD Class 2b Bin 0	
L3LEV160	California LEV-III LEV160		HDV3B630	Federal Tier 3 HD Class 3 Transitional Bin 630	
L3ULEV125	California LEV-III ULEV125		HDV3B570	Federal Tier 3 HD Class 3 Transitional Bin 570	
L3ULEV70	California LEV-III ULEV70		HDV3B400	Federal Tier 3 HD Class 3 Bin 400	
L3ULEV50	California LEV-III ULEV50		HDV3B270	Federal Tier 3 HD Class 3 Bin 270	
L3SULEV30	California LEV-III SULEV30		HDV3B230	Federal Tier 3 HD Class 3 Bin 230	
L3SULEV20	California LEV-III SULEV20		HDV3B200	Federal Tier 3 HD Class 3 Bin 200	
L3LEV395	California LEV-III LEV395		HDV3B0	Federal Tier 3 HD Class 3 Bin 0	
Transmission Type Code					
AMS	Automated Manual- Selectable (e.g. Automated Manual with paddles)	M	Manual		
A	Automatic	OT	Other		
AM	Automated Manual	SA	Semi-Automatic		
CVT	Continuously Variable	SCV	Selectable Continuously Variable (e.g. CVT with paddles)		
Drive System Code					
4	4-Wheel Drive	P	Part-time 4-Wheel Drive		
F	2-Wheel Drive, Front	A	All Wheel Drive		
R	2-Wheel Drive, Rear				

Certification Summary Information Report

Test Group		MPRXT03.0CV6		Evaporative/Refueling Family		MPRXR0140RMA	
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		

Section 8~Manufacturer Statements

8.01>> Emission Testing Waiver Statements

Certification Short Test and Idle CO Testing	In accordance with 40 CFR 86.1829-01(b), Porsche hereby certifies that, based upon good engineering judgment and previous testing, vehicles of this test group comply with applicable CST and idle CO standards.
Fuel Spitback	In accordance with 40 CFR 86.1810-01(1)(i)and(ii), Porsche hereby certifies that the vehicles covered by this test group inherently meet the fuel dispensing spitback standard for the full useful life of the vehicles as part of compliance with the refueling emissions standard.
Total Hydrocarbon	In accordance with 40 CFR 86.1829-01(b)(1)(iii)(C), Porsche hereby certifies that, based upon good engineering judgment and previous emissions testing, vehicles of this test group comply with applicable total hydrocarbon emissions standards.
Formaldehyde Emissions	Based on prior emissions testing, as allowed by 40 CFR 86.1829-01(b)(iii)(E), Porsche attests that vehicles in this test group comply with applicable formaldehyde standards.
Particulate Matter	In accordance with 40 CFR 86.1829-01(b)(1)(iii)(B), Porsche hereby certifies that the vehicles of this test group comply with the applicable standards for Particulate Matter.
N2O Compliance	Porsche has elected not to include N2O in its GHG fleet averaging calculations. Compliance with the N2O standards on the FTP cycle is indicated in the CSI report(s) in Section 7.
CH4 Compliance	Porsche has elected not to include CH4 in its GHG fleet averaging calculations. Compliance with the CH4 standards on the FTP cycle is indicated in the CSI report(s) in Section 7.
FTP High Altitude Compliance and Strategies	In accordance with 40 CFR 86.1810-09(f)(2) and 40 CFR 86.1829-01(b)(1)(ii)(B), Porsche attests that emissions control strategies used at low altitude are similarly used across all altitudes, and that the vehicles in this test group comply with all applicable emissions standards at high altitude.
Evaporative / Refueling Emissions Testing at High Altitude	In accordance with 40 CFR 86.1829-01(b)(2)(ii)(B), Porsche certifies that, based upon good engineering judgment and appropriate emissions tests, vehicles of this test group comply with applicable evaporative/refueling emissions standards at high altitude.
OBD Performance Warranty Test	Porsche attests that the emission control diagnostic system for all vehicles in this test group comply with all the performance warranty test requirements of 40 CFR 86.1844-01(d)(9)(iv).
Testing of Sub-configurations	Worst-case vehicle subconfiguration has been verified by development testing. All vehicle configurations meet the criteria pollutant standards.
Transmission modes, and other modes	Porsche vehicles typically have multiple driver-selectable driving / transmission modes, such as "Sport" and "Sport Plus", which can be driven over emission test cycles. Porsche evaluates emission performance to ensure all modes meet emissions standards. These modes, and other modes that may adapt to real-world driving conditions, such as "Towing" and "Off-Road", in that they may initiate alternate transmission scheduling and engine parameters, are described in the AECD description, Section 16. Emission standards are met in all modes.

Section 8~Manufacturer Statements

8.02>> Manufacturer Attestations

SFTP Air/Fuel Ratio Requirements	In accordance with 40 CFR 86.1811-17(d), Porsche hereby attests that for all vehicles of this test group, at no time is the air/fuel ratio richer than the leanest mixture required to obtain maximum torque, plus a tolerance of 6%.
Lean-on-Cruise Calibration Strategies	In accordance with 40 CFR 86.1810-01(i)(14), Porsche hereby attests that no lean-on-cruise calibration strategies are incorporated into the design of the vehicles in this test group.
91 RON	As required by VPCD 97-01, Porsche attests that calibrations are designed to operate on 91 RON gasoline with no need for spark adjustment. Knock sensors have no influence on fuel economy or emissions results, beyond normal test variability.
Adjustable Parameters and Tamper Resistance	Porsche attests that no calibration parameters are adjustable, and therefore no tamper resistance measures are required.
Cold Temperature Defeat Device (Continuity of Emissions)	Based on engineering evaluation of emissions data at ambient, cold, and intermediate temperatures, Porsche hereby attests that this test group complies with the prohibition of defeat device requirements described in 40 CFR 86.1809. Please refer to the Final Part 2 Common Application for supporting data and analysis.
A/C Specific Calibrations	As required by 40 CFR 86.1810-01(i)(13), Porsche hereby attests that no A/C-On specific calibrations are employed which unnecessarily reduce the effectiveness of NMOG+NOx emissions control under reasonably expected real world conditions.
Leak-Free Exhaust System	Porsche has conducted a thorough engineering analysis to ensure that the complete exhaust systems described in this Application for Certification are designed to facilitate leak-free assembly, installation and operation for the full useful life of the vehicle, as required by CFR 86.1844.01(d)(16). Porsche further attests that such repairs as might be necessary on a properly maintained vehicle throughout its full useful life can be performed in such a manner as to maintain leak-free operation, using tools commonly available in a motor vehicle dealership or independent repair facility.
California ASM and Inspection / Maintenance Standards	In accordance with ARB MAC#99-05, Porsche hereby certifies that, based upon its engineering evaluation, vehicles of this test group comply with ASM and I/M standards.
California Fill Pipe Standards	In accordance with the Title 13, California Code of Regulations Section 2235, Porsche hereby certifies that based upon good engineering judgment and previous emissions testing, vehicles of this test group comply with the applicable fill pipe requirements.
GHG Compliance	As part of the Volkswagen Group of America, Porsche is not subject to GHG compliance as an independent entity. GHG compliance is managed at the Group level by VWGoA.
Tier 3 / LEV-III Fleet Averages and Phase-Ins	As part of the Volkswagen Group of America, Porsche is not subject to these requirements as an independent entity. Tier 3 and LEV-III compliance is managed at the Group level by VWGoA.
PHEV Emissions Compliance	Porsche attests that its Plug-in Hybrid Electric Vehicles as described in all Applications for Certification remain in compliance with all emissions standards during charge depleting/sustaining transition modes.

Section 9~OBD Description

9.01>> OBD System Description

The OBD Application for this test group has been submitted to EV-CIS as the following stand-alone PDF document:

CBI_MPRXT03.0CV6_OBD Application

Section 9~OBD Description

9.02>> ARB OBD Approval

OBD Approval Letter appears on the following page.



Gavin Newsom, Governor
Jared Blumenfeld, CalEPA Secretary
Mary D. Nichols, Chair

September 17, 2020

Reference No. E-20-156

Mr. Walter J. Lewis
Regulatory Affairs Manager
Porsche Cars North America, Incorporated
One Porsche Drive
Atlanta, Georgia 30354

SUBJECT: Approval of Porsche's On-Board Diagnostics II (OBD II) System
Description for the 2021 Model Year (MY) Test Groups MPRXV02.9PV6
and MPRXT03.0CV6.

Dear Mr. Lewis,

The California Air Resources Board's (CARB) On-Board Diagnostics Branch has received the OBD II system description submitted by Porsche for the 2021 MY test groups above listed above. Representations made in the application indicate that the system is compliant with the OBD II regulation¹ with the exception of the engine start-stop monitor, evaporative system monitor, and comprehensive component monitor (CCM) for emissions neutral diagnostics. As stated in an email sent by Mr. Nathan Knight date June 30, 2020, to staff, Porsche has agreed to pay the required fine of \$25 per vehicle sold in California for the third deficiency. Therefore, CARB approves the 2021 MY system design with 3 deficiencies. In addition, although not deficient for the 2021 MY, staff has concerns regarding CCM (crankshaft adaptation and safety-only components) and general requirements (front exhaust gas sensor heater performance monitoring, radiator shutter and cooling fan monitors false pass, healing of the engine oil pressure rationality monitor, transmission control module (TCM) monitor performance, transmission monitor inhibition, and malfunction indicator light (MIL) illumination and fault code storage protocol). However, not all test groups and vehicle models have the same number of concerns. Specifically, test group MPRXT03.0CV6 (Cayenne and Cayenne S) has the general requirements (healing of the engine oil pressure rationality monitor, TCM monitor performance, transmission monitor inhibition, and MIL illumination and fault code storage protocol) and CCM (crankshaft adaptation and safety-only components) concerns; test group MPRXT03.0CV6 (Macan Turbo) has the general requirement (front exhaust gas sensor heater performance monitoring) and CCM (crankshaft adaptation and safety-only components) concerns; test group MPRXT03.0CV6 (Macan S and GTS) has the CCM (crankshaft adaptation and safety-only components) concerns; and test group MPRXV02.9PV6 (Panamera and

¹ Unless otherwise noted, all regulation references are to title 13, California Code of Regulations, section 1968.2.

Panamera S) has the general requirements (radiator shutter and cooling fan monitors false pass and MIL illumination and fault code storage protocol) concerns. Details of the evaporative system monitor and CCM for emissions neutral diagnostics deficiencies have been provided in prior approval letters (Reference Nos. E-20-057 and E-19-153). Details of the engine start-stop monitoring deficiency, CCM (crankshaft adaptation and safety-only components) concerns, and general requirements (front exhaust gas sensor heater performance monitoring, radiator shutter and cooling fan monitors false pass, heating of the engine oil pressure rationality monitor, TCM monitor performance, transmission monitor inhibition, and MIL illumination and fault code storage protocol) concerns are provided below.

In addition to the deficiencies and concerns discussed above, Porsche has disclosed during the certification process that previous model year production of some Panamera vehicles include a software error preventing two monitors in the transmission controller from executing a pass decision, which results in the inability to heal the monitors or clear the permanent fault codes (Mode \$0A). These monitors are the "gradient error, transmission fluid temperature sensor" (P0714) and "execute substitute function to open clutches, disengage gears and deactivate actors etc. not possible" (P1849) monitors. Porsche agreed to work with CARB staff to recall the affected previous production vehicles and committed to correcting the issue prior to introduction of the vehicles in test group MPRXV02.9PV6 into commerce. This approval letter does not apply to any vehicles with the software error preventing the P0714 and P1849 monitors from making a pass decision and properly clearing permanent fault codes.

Engine Start-Stop Monitoring Deficiency

Section (e)(15.1.1) requires the OBD II system to monitor any electronic powertrain component/system that can affect emissions. However, section (e)(15.4.4) allows a diagnostic to be exempt from the MIL illumination and fault code storage requirements if the diagnostic is an "emissions neutral diagnostic" and the Executive Officer has determined that the associated default action taken by the diagnostic meets the definition of "emissions neutral default action" in section (c). This definition requires that, among other conditions, the default action "cannot measurably increase emissions during any reasonable in-use driving condition." For vehicles in the test groups listed above, Porsche has implemented an engine start-stop feature. The feature stops the engine from running under certain driving conditions that would otherwise be engine idling conditions if the engine start-stop feature were not present on the vehicle. When the control system detects a malfunction of the engine start-stop system, Porsche deactivates the engine start-stop feature such that the engine continues to run during idling conditions. Although Porsche may have received CARB approval to categorize the engine start-stop system diagnostics as emissions neutral diagnostics, including approval to categorize the start-stop system deactivation as an

emission neutral default action, staff has since reviewed information indicating that this deactivation results in a measurable increase in emissions during reasonable in-use driving conditions. Thus, staff has determined that the engine start-stop system diagnostics and associated stop-start system deactivation do not meet the definitions of "emissions neutral diagnostic" and "emissions neutral default action," respectively. CARB staff previously identified this as a concern for the 2020 MY (Reference No. E-19-093) and required Porsche to implement OBD II diagnostics that illuminate the MIL and store fault codes for engine start-stop system malfunctions by the 2021 model year in order to avoid a deficiency for lack of engine start-stop system monitoring. Porsche did not implement these diagnostics and therefore, the Porsche system is deficient for lack of engine start-stop system monitoring. Porsche is required to implement these diagnostics in future model year vehicles to remove the deficiency.

CCM Concern (Crankshaft adaptation)

Section (e)(15.2.1) requires the OBD II system to detect malfunctions of input components caused by circuit faults (or for digital inputs, lack of communication to the on-board computer), out of range values, and, where feasible, rationality faults. Specifically, for vehicles that require precise alignment between the camshaft and the crankshaft, the OBD II system is required to monitor the crankshaft position sensor(s) and camshaft position sensor(s) to verify proper alignment between the camshaft and crankshaft in addition to monitoring the sensors for circuit continuity and rationality malfunctions. Porsche's system monitors the mechanical tolerances of the crankshaft wheel. The segment adaptation of the crankshaft wheel adapts two different segments (i.e., for regular operation and for catalyst heating). The start and end of a segment is different between regular operation and catalyst heating because the injection timing and ignition timing during catalyst heating occurs during different operation times. The two different adaptations are monitored and the crank signal tooth spacing characteristics cannot drift or lose accuracy during everyday vehicle use. However, Porsche indicated that a software bug can cause the crankshaft position system variation monitor to falsely pass. If the segment length deviation occurs in certain marked areas, no adaption value for crankshaft adaption is stored (i.e., no error due to excessive tolerances on the crankshaft wheel is recognized). Staff is concerned that this software error may delay malfunction detection and necessary repair. Porsche is required to implement a resolution to avoid a deficiency in future model year vehicles.

CCM Concern (Safety-Only Components)

Section (e)(15.1.1) requires monitoring of components and systems that can affect emissions according to the criteria in section (e)(15.1.2). Porsche previously judged several components as not subject to the monitoring requirements without realizing the existing default actions required consideration as emission neutral default actions in lieu of the criteria described in section (e)(15.1.2). In addition, some of the components may be eligible for safety-only monitoring exemptions per section

(e)(15.1.3) of the OBD II regulation. The components of concern are the radiator shutters, cooling fan, electrical recirculation air valve, supplementary water pump (turbocharger), supplementary heating pump, cooling water temperature sensor radiator outlet, engine cover temperature sensor, engine compartment purge fan, switchable cooling water pump solenoid valve, exhaust flap, transmission speed sensor, clutch switch sensor, and neutral gear sensor. Porsche is required to submit data and/or engineering evaluation that demonstrate the components and associated default actions meet the regulatory provisions for safety-only exemptions or emission neutral default actions to avoid a deficiency determination in future model year vehicles.

General Requirement Concern (Front Exhaust Gas Sensor Heater Performance Monitor)

Section (e)(7.2.3)(A) of the regulation requires the OBD II system to detect a malfunction of the exhaust gas sensor heater performance when the current or voltage drop in the heater circuit is no longer within the manufacturer's specified limits for normal operation (i.e., within the criteria required to be met by the component vendor for heater circuit performance at high mileage). Porsche's front oxygen sensor heater performance monitor (P0135) consists of 2 monitors: one that detects a heater performance fault within a specified time after a cold start (i.e., start monitor) and another that detects a heater performance fault during normal operating conditions (i.e., permanent monitor). Porsche indicated that if the start monitor detects a degraded front oxygen sensor heater after a short soak (e.g., 2-5 minutes), a pending fault code is stored but an incorrect calculation of the engine off time occurs, which incorrectly invokes the start monitor in the subsequent driving cycle. Consequently, with the front oxygen sensor heater already warm, the start monitor will falsely pass and erase the pending fault code. Although Porsche indicated that fault detection eventually occurs during normal operating conditions on subsequent driving cycles, staff is concerned that this software error may delay malfunction detection and necessary repair. Porsche is required to implement a solution to avoid a deficiency in future model year vehicles.

General Requirement Concern (Healing of Engine Oil Pressure Rationality Monitor)

Porsche identified a calibration error with the engine oil pressure rationality monitor (P0521). The monitor runs after engine shut down and detects a malfunction when the relative oil pressure is greater than 30 kilopascals (kPa). However, Porsche incorrectly calibrated the monitor's healing condition to use the absolute oil pressure value instead of the relative oil pressure value to compare to the threshold. As such, the monitor can never pass because the absolute oil pressure will never go below 30 kPa, so after the monitor stores a fault code and illuminates the MIL, the fault code cannot be healed and the MIL cannot be extinguished by the OBD system. The fault code can only be erased and the MIL extinguished by a Mode \$04 fault clear by a scan tool. After the malfunction is repaired and a Mode \$04 fault clear is performed, the

monitor would need to run and make a pass decision to erase the permanent fault code. Porsche is required to implement a resolution to avoid a deficiency in future model year vehicles.

General Requirement Concern (TCM Monitor Performance)

Porsche identified a software error where various TCM counters (e.g., warmup cycle counter, driving cycle counter, "normtrip" counter, and "minimumtrip" counter) can incorrectly increment twice in a driving cycle. This error could cause TCM monitors to illuminate or extinguish the malfunction indicator light (MIL) too early. Porsche indicated that this event is very unusual under normal conditions. However, staff is concerned that this software error may result in incorrect indication of malfunction during the driving cycle in accordance with MIL and fault code protocol. Porsche is required to implement a resolution to avoid a deficiency in future model year vehicles.

General Requirement Concern (Transmission Monitor Inhibition)

Porsche identified a software calibration issue with certain non-MIL relevant TCM diagnostics that will disable some MIL relevant diagnostics. For example, a loss of communication in the gear shift module, which is detected by a non-MIL diagnostic (U0103), will disable the gear shift control module performance monitor (P085D) with no MIL illuminated. Upon detecting these non-MIL relevant diagnostic failures, Porsche indicates that the OBD II system will immediately inform the driver with a warning displayed on the instrument cluster. In addition, malfunctions that would have been detected by some of these inhibited MIL relevant diagnostics will cause an overt indication such that the driver is certain to respond and have the problem corrected (e.g., causing the gearshift control module to be out of function so that the driver will no longer be able to shift gears or restart the vehicle). For malfunctions that would have been detected by other inhibited diagnostics, MIL illumination will result due to other diagnostics detecting the malfunction. Although a malfunction results in sufficient overt indication to ensure correction, or the MIL is illuminated by another monitor, staff is concerned that this software error may delay necessary repair and does not provide the malfunction pinpointing intended. Porsche has indicated the software will be corrected for the 2022 MY. If the correction is not implemented as scheduled, staff will consider the issue deficient for the 2022 MY.

General Requirement Concern (Radiator Shutter and Cooling Fan Monitors False Pass)

The OBD II regulation requires manufacturers to define monitoring conditions for detecting malfunctions that are technically necessary to ensure robust detection of malfunctions (e.g., avoid false passes and false indications of malfunctions). Porsche identified a software error with the coolant fan and radiator shutter monitors that can cause the monitors to falsely pass. Specifically, if the engine is turned off before the monitor is enabled and a fault code is present, the ECM incorrectly heals the fault. Porsche is required to implement a resolution to avoid a deficiency in future model year vehicles.

Mr. Walter J. Lewis
September 17, 2020
Page 6

General Requirement Concern (MIL Illumination and Fault Code Storage Protocol).
Section (d)(2.2) of the OBD II regulation requires manufacturers to store fault codes indicating the likely area of a detected malfunction. Porsche identified a software bug that incorrectly detects the monitoring results of the 2nd purge line as being the monitoring results of the 1st purge line. The error occurs during boost pressure calculation for fault detection. The monitor falsely judges that the boost pressure reading of the 2nd purge line belongs to the 1st purge line. Staff is concerned that this pinpointing issue may delay repair. Porsche is required to implement a resolution to avoid a deficiency in future model year vehicles.

Deficiency Fines

The deficiency provisions of section (k) of the OBD II regulation outline the deficiencies for which fines apply and the fine amounts per vehicle. Additionally, where practical, the emission level in excess of the required levels has been identified in the details of the deficiencies provided. Therefore, Porsche is subject to fines of \$25 for each vehicle produced for sale in California from the test groups listed above. Such fines are to be paid to the State Treasurer for deposit in the Air Pollution Control Fund. The total fines that Porsche will be required to pay will be based on production and distribution records provided by Porsche to CARB for the 2021 MY. Porsche could limit its total liability should it elect to implement a running change correcting one or more of these deficiencies during the model year. Upon CARB approval of these changes, vehicles produced subsequent to such changes may be subject to a revised fine amount. Fines are payable on a quarterly basis. Calendar year quarters are used (e.g., January through March is quarter one) and payment is due within 30 days from the end of the following the end of the calendar quarter. Within 30 days from the end of the calendar quarter, manufacturers shall report the number of affected vehicles produced for sale in California during the quarter and submit the total payment for the vehicles produced for sale during that quarter.

Should you have questions or comments regarding this letter, please contact Danny Tran, Air Pollution Specialist, at (626) 450-6101, or via email at danny.tran@arb.ca.gov.

Sincerely,



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

cc: Danny Tran
Air Pollution Specialist
Emissions Certification and Compliance Division

Section 10~Description of Alternate-Fueled Vehicles

This section is Not Applicable (Porsche has no Alternate-Fueled Vehicles).

Section 11~AECD Description

None. Proprietary information.

Section 12~Test Parameters and Description of Vehicles Covered by Certificate

12.01>> Vehicle Description and Parameters

Model Name	Cayenne	Cayenne Coupé	Cayenne S	Cayenne S Coupé
Evaporative Family	MPRXR0150RED	MPRXR0150RED	MPRXR0150RED	MPRXR0150RED
Vehicle Classification	LDT	LDT	LDT	LDT
Sales Area	50 State			
Transmission *	S8	S8	S8	S8
Engine Displ. (L)	3.0	3.0	2.9	2.9
Engine Code	DCB	DCB	DCA	DCA
Catalysts	See Section 2			
EGR Type	Not Applicable			
Air Pump Type	None			
Intake Air Aspiration Method	Turbocharged	Turbocharged	Turbocharged	Turbocharged
Idle Start/Stop	Default On	Default On	Default On	Default On
Transmission Mode	Automatic	Automatic	Automatic	Automatic
Starting Procedure	See Section 6.02			
Cooling Fan				
Drive Accuracy Per 1066.425	Yes	Yes	Yes	Yes
SIL	None	None	None	None
Fuel System Type	direct fuel injection	direct fuel injection	direct fuel injection	direct fuel injection
Fuel Tank Vol. (Gal)	23.8	23.8	23.8	23.8
Optional Tank (Gal)				
Canister Working Capacity (g)	150	150	150	150
Canister Bed Volume	2660	2660	2660	2660
Fuel Temperature Profile	See Section 6			
ETW [Lbf]	5000	5000	5250	5250
Curb Weight	4696	4742	4892	4852
Gross Vehicle Weight	2995	2995	2894	2894
Test Horsepower	332	332	406	405
Shift Schedules	See Section 6			
Cooling Fan Configuration				
Axle Ratio	3.21	3.21	3.21	3.21
N/V Ratio	48.8	49.3	48.8	49.5
Tire Size _s	Front	255/55 R19	275/45 R20	255/55 R19
	Rear	275/50 R19	305/40 R20	275/50 R19
RLHP		18.0	17.7	18.9
Single Roll Coefficients (target)	A [lbf]	49.458	51.706	55.078
	B [lbf/mph]	0.71635	0.39797	0.71635
	C [lbf/mph ²]	0.01991	0.02440	0.02020

Note: blank cells or tables are intentionally blank.

* "S8" means conventional torque converter automatic with 8 speeds

Section 12~Test Parameters and Description of Vehicles Covered by Certificate

12.01.01>> Vehicle Description Continued

Model Name	Macan S	Macan GTS	Macan Turbo	
Evaporative Family	MPRXR0140RMA	MPRXR0140RMA	MPRXR0140RMA	
Vehicle Classification	LDT	LDT	LDT	
Sales Area	50 State			
Transmission	A7	A7	A7	
Engine Displ. (L)	3.0	2.9	2.9	
Engine Code	DLZ	DGR	DGR	
Catalysts	See Section 2			
EGR Type	Not Applicable			
Air Pump Type	None			
Intake Air Aspiration Method	Turbocharged	Turbocharged	Turbocharged	
Idle Start/Stop	Default On	Default On	Default On	
Transmission Mode	Automatic	Automatic	Automatic	
Starting Procedure	See Section 6.02			
Cooling Fan				
Drive Accuracy Per 1066.425	Yes	Yes	Yes	
SIL	None	None	None	
Fuel System Type	direct fuel injection	direct fuel injection	direct fuel injection	
Fuel Tank Vol. (Gal)	17.2	19.8	19.8	
Optional Tank (Gal)				
Canister Working Capacity (g)	140	140	140	
Canister Bed Volume	2800	2800	2800	
Fuel Temperature Profile	See Section 6			
ETW [Lbf]	4750	4750	4750	
Curb Weight	4293	4484	4535	
Gross Vehicle Weight	5688	2894	2894	
Test Horsepower	348	383	406	
Shift Schedules	See Section 6			
Cooling Fan Configuration				
Axle Ratio	4.67	4.67	4.67	
N/V Ratio	41.0	56.5	56.5	
Tire Size _s	Front	255/50 R19	265/45 R20	265/45 R20
	Rear	255/50 R19	295/40 R20	295/40 R20
RLHP		18.6	19.0	19.2
Single Roll Coefficients (target)	A [lbf]	64.520	67.892	67.892
	B [lbf/mph]	0.26049	0.17728	0.17728
	C [lbf/mph ²]	0.02480	0.02638	0.02696

Note: blank cells or tables are intentionally blank.

Please also refer to Section 17.02 for additional information on Porsche's Sales and Phase-ins for the 2021 model year.

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Section 14~Request for Certification

14.01>> Statement of Compliance

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

The term pollutants means:

- a. Diesel particulates
- b. Nickel
- c. MMT combustion products
- d. Ammonia
- e. Sulfates
- f. Hydrogen sulfide
- g. Hydrogen cyanide
- h. Ruthenium combustion products
- i. Nitrosamines,

or any other pollutant, which Porsche has identified, which can reasonably be expected to be emitted from these vehicles.

All vehicles have been tested in accordance with good engineering practice to ascertain that such test vehicles meet the requirements of this section for the useful life of the vehicle.

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

Signed and dated by:



October 5, 2020

Walter J. Lewis – Porsche Cars North America, Inc.

Section 14~Request for Certification

14.02>> CARB Carryover Compliance Statement

Appears on the following page.



Porsche Cars North America
One Porsche Drive
Atlanta, GA 30354
August 5, 2020

Chief
Emissions Compliance, Automotive Regulations and Science Division
California Air Resources Board
9480 Telstar Ave., Suite 4
El Monte, CA 91731

Porsche Cars North America (Porsche) is requesting the California Air Resources Board approve the following Full Carryover Application for test group MPRXT03.0CV6 with evaporative/ORVR families MPRXR0150REE and MPRXR0140RMA, based on carryover data from the MY 2020 test group LPRXT03.0CV6 with evaporative/ORVR families LPRXR0150REE, LPRXR0150RED, and LPRXR0140RMA, and Executive Order number A-019-0272-1. By signing this letter, Porsche is certifying that this model year's application package:

1. Includes no change in the emission standards/FELs, regulation requirements, emission characteristics of the engine, or test procedures requirements;
2. Differs from the 2020 application package only by:
 - X Model year
 - X Test Group/Engine/Vehicle/Evaporative family name (typically the first character)
 - ☐ Manufacturer contact information
 - X Projected sales data;
3. Is identical to the 2020 application package (incorporates all approved running changes to date), and;
4. Is complete and named correctly using the appropriate Document Management System (DMS) file and workflow naming conventions and submitted using the correct workflow process, per ECARS 15-07.

If you have any questions regarding this request, please contact me at 770-290-3111 or by email at douglas.mcgregor@porsche.us.

Sincerely,

A handwritten signature in black ink that reads "Doug McGregor". The signature is written in a cursive, flowing style.

Doug McGregor
Senior Regulatory Affairs Engineer

Section 15~Other Information

15.01>> Fee Filing Form

Appears on the following page.

US EPA Fee Form

General Information

Date:	07/21/2020
Process Code:	Submit New Filing Fee Form
Manufacturer Code:	PRX
Manufacturer Name:	Porsche

Manufacturer Contact

Name:	Doug McGregor
Email Address:	douglas.mcgregor@porsche.us
Phone:	7703903111
Calendar Year complete application submitted to EPA:	2020
Engine Family / Evaporative Family / Test Group:	MPRXT03.0CV6

Certificate Request Type (Industry Sector Code)

- | | |
|--|---|
| ☒ On-Highway LDV, LTD, MDVPV, HDV Chassis Cert (Federal) (A, B, D, J, T, V) | ☐ Nonroad CI (L) |
| ☐ On-Highway HDE Dyno Cert (Federal) (E, H) | ☐ Nonroad SI (B, S) |
| ☐ On-Highway LD ICI, MDPV ICI, HDV ICI (A, B, D, J, T, V) | ☐ Locomotive (G, K) |
| ☐ On-Highway Motorcycle (C) | ☐ All Nonroad Recreational, excluding Marine engines (X, Y) |
| ☐ On-Highway HDV Evap (F) | ☐ All Marine (Including IMO) (M, N, W) |
| ☐ On-Highway LDV, LTD, MDVPV, HDV Chassis Cert (California-Only) (A, B, D, J, T, V) | ☐ Component Certification for Evaporative Emissions (P) |
| ☐ On-Highway HDE Dyno Cert (California-Only) (E, H) | |

IMO Name (Required for dual US/IMO Marine Only):

ICI VIN Number (Required for ICIs Only):

Do you qualify for a Reduced Fee (RF)?

What is the total number of vehicles, engines, or units covered?:

What is the aggregate total retail value of the vehicles, engines or units covered?:

Payment Information

Amount Owed:	27,347.00
Payment Type:	Offline ACH

Comments:

Models: Cayenne / Cayenne S / Cayenne Coupe / Cayenne Coupe S / Macan S / Macan Turbo / Macan GTS

CC: SVCP X

Order #: 100541

GL #: 672900

pay.gov tracking: 26PG813K X

EPA Form Number 3520-29

OMB Control No. 2060-0545

Approval expires 12/31/2019

The public reporting and recordkeeping burden for this collection of information is estimated to average 20 minutes per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.

Section 16~Confidential Information

None.