Application for Emissions Certification

Model Year:	2027
Test Group:	VASXV05.2AMV
Evaporative Family:	VASXR0160T3A
Durability Group:	VASXGPGNNE31
Certification Summary Information Report # (CSI)	VASXV05.2AMV-VASXR0160T3A
Durability Group Description:	Four Stroke, Otto Cycle Sequential Gasoline Fuel Injection, Pressure Charged Induction, Catalyst Code: E31 Ceramic Monolith, Pd/Rh Catalyst,
Test Group Description:	5.2 litre, 2WU-TWC/2TWC/2WR-H02S/2HO2S/2TC/2CAC/SFI/AIRE
Applicable Standards:	50 state - EPA Interim T4 Bin125, CARB LEV4 ULEV125
Car Lines Covered:	370 - Vanquish 382 - Vanquish Volante

Vehicles Tested:	EDV	Config	Test	VERIFY Test Number
Exhaust	370TT7334	00	FTP	SASX10087763
			HWFET	SASX10087764
			Cold CO	SASX10087766
			SC03	SASX10087767
			US06 - 2 bag	SASX10087765
			50F	SASX10087768

EPA Response Requested By: March 23, 2026

For questions, Contact: Sean Giffels (501) 454 1800

Table of Contents

1. Correspondence and Communications

1.1. Authorized Persons

1.1.1. Persons situated in the United Sates and authorized to communicate with EPA and CARB

Name	First Name	Area of responsibility	Phone Number	E-Mail
Giffels	Sean	Product Planning Executive	(501) 454 1800	sean.giffels@astonmartin.com

The preceding representative can be reached under:

Aston Martin North America
Product Planning
11 W 42nd Street
Floor 22
New York NY10036

1.1.2. Generic email Address

Email address for transmitting information relevant to the Application and for delivering electronic certificates.

amlcerts@astonmartin.com

1.1.3. Persons situated in the manufacturer's home office and authorized to communicate with EPA and CARB

Name	First Name	Area of responsibility	Phone Number	E-Mail
Naughton	Simon	Senior Manager Legislation & Certification.	00 44 1926 644090	simon.naughton@astonmartin.com
Gillibrand	Karl	Manager Powertrain Certification.	00 44 1926 644159	karl.gillibrand@astonmartin.com
Yarrow	Jon	Technical Specialist Powertrain Certification.	00 44 1926 644192	jon.yarrow@astonmartin.com
Haggett	Martin	Technical Specialist Powertrain Certification.	00 44 7484 676 255	martin.haggett@astonmartin.com
Johnson	Philip	Project Engineer Legislation & Certification.	00 44 1926 644159	philip.johnson@astonmartin.com
Ames	Peter	Project Engineer Legislation & Certification.	00 44 1926 644051	peter.ames@astonmartin.com

The preceding representatives can be reached under:

Aston Martin Lagonda Ltd
Legislation & Certification Dept
Banbury Road, Gaydon
Warwick CV35 0DB
U.K.

Fax-No. 00 44 1926 644001

1.2. Certificate Information

1.2.1. Corporate Name and Address that should appear on the Certificate of Conformity and on the Executive Order

Aston Martin Lagonda Ltd
Banbury Road, Gaydon
Warwick
CV35 0DB
U.K.

1.2.2. Name and Address of the person to whom the Certificate and the Executive Order should be mailed

Aston Martin Lagonda Ltd
Legislation & Certification Dept
Banbury Road, Gaydon
Warwick CV35 0DB
U.K.

Electronic certificates can be e-mailed to: amlcerts@astonmartin.com

1.3. Primary Certification Contact:

Primary Certification Contact See Section 1.1.1.

2. Durability Group Description

2.1.	Durability Group Name	VASXGPGNNE31
2.2.	Combustion Cycle	Four stroke, Otto cycle, piston
2.3.	Engine Type	V12 Turbocharged
2.4.	Fuel	Gasoline
2.5.	Basic Fuel Metering System	Multipoint, sequential fuel injection
2.6.	Catalyst Construction	Ceramic
2.7.	Precious Metals in Catalyst	Palladium and Rhodium 3-Way
2.8.	Range of Catalyst Grouping Statistic	2.5g/litre (determined from grouping statistic equation).

3. Evaporative/Refueling Family Description

3.1. Evaporative/Refueling Family VASXR0160T3A

3.2. Evaporative/Refueling Family Parameters specified in 40 CFR § 86.1821-01:

3.2.1.	Type of vapor storage device	Canister
3.2.2.	Canister Parameters:	
	Basic canister design	Oval cylinder, capped end plates
	Working capacity	160 g
	System configuration	Single canister
	Canister geometry, construction and materials	Oval cylinder, partition type, bleed control function, nylon body, molded ports with multi o-ring quickfit connections to vapor lines
3.2.3.	Fuel system	Non-return type
3.2.4.	Type of refueling emission control system	Integrated with the evaporative control system
3.2.5.	Fill pipe seal mechanism	Liquid seal
3.2.6.	Vapor control system	Open system with fill limit vent valve, rollover valves and vent lines internal to the fuel tank
3.2.7.	Purge control system	Twin PWM control purge valves with feedback
3.2.8.	Vapor hose material	Nylon multi-layer with PVDF barrier
3.2.9.	Fuel tank material	Stainless Steel

3.3. ORVR Statement

Evaporative / Refuelling family reviewed by EPA / NHTSA

Date of EPA/NHTSA Submittal	Date of EPA/NHTSA Approval	Evaporative/Refuelling Family	Vehicle Models	Model Year
08/11/2004	08/17/2004	5ASXR0160803	DB9	2005

To be certified for Model Year 2027:

Date of EPA Part 1 Submittal	Evaporative/Refuelling Family	Respective ORVR Vehicle Model
02/23/2026	VASXR0160T3A (in combination with Test Group VASXV05.2AMV)	DB11

We herewith certify, that compared with the reviewed certification of the refuelling family mentioned above, there are no changes regarding the refuelling emission system design on Vanquish that requires a new or significantly revised Evaporative/Refuelling family to be created.

The evaporative/refuelling family to be certified for model year 2027 includes the use of EPA assigned deterioration factors (DFs) as published in CD-12-07Enclosure 2 and as advised the use of these factors for Tier 3 certifications.

There have been no in-use problems or defects related to Aston Martin ORVR systems that required action by Aston Martin Lagonda Ltd.

There have been no service notifications, campaigns, instructions or bulletins to dealers or field personal or changes in production procedures or components. No safety-related defect campaigns have been conducted related to the Aston Martin ORVR systems.

This information covers all required items of CCD-05-03.

4. Durability Procedure Description

4.1. Description of Durability process used:

4.1.1.	Durability Program for Exhaust Emissions:	Aston Martin Lagonda Ltd voluntarily conducted accelerated bench aging durability using the Standard Bench Aging Durability Procedure contained in 40CFR 86.1823-08(d), based on a mathematical comparison of SRC with SBC data to define the time at temperature relationship for this catalyst design.
4.1.2.	Durability Program for Evaporative/Refueling Emissions:	Not applicable - use of EPA assigned DFs for 2022MY and subsequent.

4.2. Deterioration Factors

4.2.1.	Exhaust Emissions:	Additive deterioration factors. For deterioration factors refer to the confidential information in Section 16 and to the Summary Sheet enclosed in Section 7 of this application.
4.2.2	Evaporative/Refueling Emissions:	Additive deterioration factors. - as shown in CD-2023-01 table 3.

5. Test Group Description

5.1.	**Test Group Name**	VASXV05.2AMV
5.2.	**Certification Summary Information Report # (CSI)**	VASXV05.2AMV-VASXR0160T3A
5.3.	**Engine Displacement**	5204 cm³ (318 in.³).
5.4.	**Arrangement and number of cylinders:**	
5.4.1.	Arrangement of cylinders	V - Configuration
5.4.2.	Number of cylinders	12
5.5.	**Emission Standards**	
5.5.1.	Vehicle class covered	EPA - LDV California and green states - PC
5.5.2.	Emission Standards class	50 state - EPA Interim T4 Bin125, CARB LEV4 ULEV125
5.5.3.	EVAP Emissions Standards Class	Tier 3/LEV 4
5.5.4.	Applicable Emission Standards	Refer to the CSI in Section 7 and section 17.7

6. Test Vehicle Description

6.1. Test Vehicles

Line No.	EDV	Config No.	Engine Displ (cm³)	Emission Control System	Engine Code	Trans	ETW	Axle Ratio	Remarks
1	370TT7334	00	5204	2WU-TWC/2TWC/2WR-H02S/2HO2S/2TC/2CAC/SFI/AIRE	AE34/	A8	4500	2.93	EDV & FEDV – FTP, HWFET, Cold CO, US06, SC03 and 50F
2	564TT5477	00	3982	2WU-TWC/2TWC/2WR-H02S/2HO2S/2TC/2CAC/DFI	177950	A8	4500	2.7	Evap EDV
3	382TT7334	00	5204	2WU-TWC/2TWC/2WR-H02S/2HO2S/2TC/2CAC/SFI/AIRE	AE34/	A8	4750	2.93	FEDV

For complete vehicle descriptions, refer to the Summary Sheet enclosed in Section 7 of this application.

6.2. EDV Selection

All the vehicle configurations certified are covered by data from the above EDV(s)

6.3. VERIFY Test Numbers:

EDV No.	Type of Test	VERIFY Test No.
370TT7334	FTP	SASX10087763
	HWFET	SASX10087764
	COLD CO (20F)	SASX10087766
	SC03	SASX10087767
	US06 - 2 bag test	SASX10087765
	50F	SASX10087768
564TT5477	2 Day Evap	statement
	3 Day Evap	NASX10082352
	ORVR	NASX10071584

7. Certification Summary Information Report

For requested information refer to the attached CSI Sheet processed by EV-CIS:

Enclosure No.	CSI Report #	Date
1	VASXV05.2AMV-VASXR0160T3A	02/23/2026

CSI pages are appended following this page:

Certification Summary Information Report

Manufacturer	Aston Martin Lagonda	**Manufacturer Code**	ASX
Test Group	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A
Certificate Number	--	**CARB Executive Order #**	--
Certificate Issue Date	--	**Certificate Revision Date**	--
Certificate Effective Date	--	**Conditional Certificate**	--
CSI Revision #	--	**CSI Submission/Revision Date**	03/09/2026 08:53:10 AM
Model Year	2027		

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	Multipoint/sequential fuel injection	No

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Rechargeable Energy Storage System Indicator**	No
Multiple Fuel Combustion	--	**Off-board Charge Capable Indicator**	--
Fuel Cell Indicator	No	**EPA Vehicle Class**	LDV
Federal Clean Fuel Vehicle	Yes	**Federal Clean Fuel Vehicle Standard**	ULEV
Federal Clean Fuel Vehicle ILEV	No	**California Partial Zero Emissions Vehicle Indicator**	No
Durability Group Name	VASXGPGNNE31	**Durability Group Equivalency Factor**	1.0
Reduced Fee Test Group	No	**Certification Region Code(s)**	FA, CA
Complies with HD GHG 2b/3 regulations?	No		
Introduction into Commerce Date	--	**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**	--
SFTP LEV-III Composite Compliance Indicator	Yes		
OBD Compliance Type	CARB	**OBD Demonstration Vehicle Test Group**	VASXJ04.0AEX
Test Group OBD Compliance Level	Partial - with deficiencies	**Number of Test Group OBD Deficiencies**	1
OBD Deficiencies Comments	Lack of J1979-2		
Mfr Test Group Comments	--		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A

Evaporative/Refueling Family Information

Evaporative Summary Information Type	New	**Submission/Correction Date**	02/16/2026 08:37:10 AM
Integrated ORVR?	Yes	**Fuel(s)**	Gasoline
Multiple Fuel Storage	--		
Bladder Fuel Tank?	No		
Fuel Tank Material	Metal	**Fuel Tank Material Description**	Stainless Steel
Fill Pipe Seal Type	Liquid seal		
Air Intake System Vapor Storage Device?	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)	160	**Number of Primary Canisters**	1
Number of Bleed Canisters	0	**Bleed Canister Total Working Capacity (grams)**	--
Mfr Evaporative/Refueling Family Comments	LDV/PC Evap Family only		

Leak Family Details

Leak Family Indicator	Yes		
Canister Bleed Test Indicator	Yes	**Applicability of Evaporative Canister Bleed Test**	50 State
Evaporative Canister Bleed Test Comments	Common AML BETP data		
CARB Fuel Only (Rig) Test Indicator	No	**Applicability of CARB Fuel Only (Rig) Test**	--
CARB Fuel Only (Rig) Test Comments	--		

Leak Family Name	Applicability of Leak Family Requirements	Leak Family Standard (inches)	Leak Family Description
VASXR0160T3A-001	50 State	0.02	Common AML Leak Family

Models Covered by this Certificate

Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - Type	- # of Gears	Trans - Lockup
Aston Martin Lagonda	1 - Aston Martin Lagonda Ltd	382 - Vanquish Volante	California + CAA Section 177 states	2-Wheel Drive, Rear	Automatic	8	Yes
Aston Martin Lagonda	1 - Aston Martin Lagonda Ltd	370 - Vanquish	Federal	2-Wheel Drive, Rear	Automatic	8	Yes
Aston Martin Lagonda	1 - Aston Martin Lagonda Ltd	370 - Vanquish	California + CAA Section 177 states	2-Wheel Drive, Rear	Automatic	8	Yes
Aston Martin Lagonda	1 - Aston Martin Lagonda Ltd	382 - Vanquish Volante	Federal	2-Wheel Drive, Rear	Automatic	8	Yes

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	12	**Mechanically Variable Compression Ratio Indicator**	N

Certification Summary Information Report

Test Group	VASXV05.2AMV	Evaporative/Refueling Family	VASXR0160T3A

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
3	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
4	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith

Mfr After Treatment Device (ATD) Comments	Single canister per bank containing a warm up primary element and a downstream secondary element.
Direct Ozone Reduction (DOR) Device	Not Equipped
Mfr Emission Control Device Comments	--

Engine Configuration Number 1

Engine Displacement (liters)	5.2	**Engine Rated Horsepower**	825
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**	Liquid
Air Aspiration Drive Method(s)	Hydraulic		
Cylinder Deactivation	No		
Cylinder Deactivation Description	--		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	Inlet and Exhaust Cam Phasing		
Variable Valve Lift?	No		
Variable Valve Lift System Description	--		
Number of Knock Sensors	4	**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	Yes		
Air Injection Type	Secondary Air Injection	**Air Injection Type if 'Other'**	--
Mfr Engine Configuration Comments	Vanquish base engine spec		

Certification Summary Information Report

Test Group	VASXV05.2AMV	Evaporative/Refueling Family	VASXR0160T3A

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	SASX10087763	SASX10087765	SASX10087767	SASX10087766	SASX10087764	12.6	12.5	20.4	19.4	--

SFTP LEV-III Official Test Numbers

Test Group Fuel	FTP	US06	SC03
Gasoline	SASX10087763	SASX10087765	SASX10087767

Certification Summary Information Report

Test Group	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A

Emission Data Vehicle Information

Vehicle ID / Configuration	370TT7334 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	SASXV05.2AMV	**Original Evaporative/Refueling Family**	SASXR0160T3A
Original Test Vehicle Model Year	2025		

Vehicle Model

Represented Test Vehicle Make	Aston Martin	**Represented Test Vehicle Model**	Vanquish

Leak Family Details

Leak Family Identifier	001	**Leak Family Name**	SASXR0160T3A-001

Drive Sources and Fuel System Details

Drive Source and Fuel#	Drive Source	Fuel
1	Combustion Engine	Gasoline

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	--	**Rechargeable Energy Storage System Indicator**	--
Rechargeable Energy Storage System	--	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	--		
Odometer Correction -- Initial	0	**Odometer Correction Factor**	0.9999
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Miles		
Engine Code	AM34A/	**Rated Horsepower**	825
Displacement (liters)	5.2		
Air Aspiration Method	Turbocharged	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	2	**Air Aspiration Device Configuration**	Parallel
Charge Air Cooler Type	Liquid	**Drive Mode While Testing**	2-Wheel Drive, Rear
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	4211	**Equivalent Test Weight (pounds)**	4500
GVWR (lbs)	--	**N/V Ratio**	22.6
Axle Ratio	2.93		
Transmission Type	Automatic	**# of Transmission Gears**	8
Transmission Lockup	No	**Creeper Gear**	No

Certification Summary Information Report

Test Group	VASXV05.2AMV	Evaporative/Refueling Family	VASXR0160T3A

Dynamometer Coefficients:

Coefficient Category	Target Coefficients A (lbf)	Target Coefficients B (lbf/mph)	Target Coefficients C (lbf/mph**2)	Set Coefficients A (lbf)	Set Coefficients B (lbf/mph)	Set Coefficients C (lbf/mph**2)	EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
City/Highway/Evap	49.17	0.3527	0.0226	-0.57	-0.0029	0.0128	16.4
Cold CO	54.08	0.3879	0.0294	0.53	-0.0024	0.0144	N/A
US06	49.17	0.3527	0.0226	-0.57	-0.0029	0.0128	N/A

Emission Control Device Comments --

Manufacturer Test Vehicle Comments 2025MY Vanquish

Certification Summary Information Report

Test Group	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A

Test #	**SASX10087763**	**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	09/04/2024	**Fuel**	Gasoline
Fuel Batch ID	60626	**Fuel Calibration Number**	7774
Vehicle Class	LDV/Passenger Car	**DF Type**	EPA Assigned
Verify Test Lab ID	Bertrandt		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3812	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Certification Summary Information Report

Test Group	VASXV05.2AMV	Evaporative/Refueling Family	VASXR0160T3A

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	574.046	--
CO BAG 1 (Bag 1 Carbon Monoxide)	2.459	--
FE BAG 1 (Bag 1 Fuel Economy)	15.005	15.005
CH4 BAG 1 (Bag 1 Methane)	0.037	--
NMOG BAG 1 (Bag 1 Non-methane organic gases)	0.085	--
CO2 BAG 2 (Bag 2 Carbon Dioxide)	571.373	--
CO BAG 2 (Bag 2 Carbon Monoxide)	1.063	--
FE BAG 2 (Bag 2 Fuel Economy)	15.141	15.141
CH4 BAG 2 (Bag 2 Methane)	0.008	--
NMOG BAG 2 (Bag 2 Non-methane organic gases)	0.001	--
CO2 BAG 3 (Bag 3 Carbon Dioxide)	476.984	--
CO BAG 3 (Bag 3 Carbon Monoxide)	0.258	--
FE BAG 3 (Bag 3 Fuel Economy)	18.174	18.174
CH4 BAG 3 (Bag 3 Methane)	0.006	--
NMOG BAG 3 (Bag 3 Non-methane organic gases)	0.002	--
METHANE (CH4 - Methane)	0.013	--
CO (Carbon Monoxide)	1.13	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.937	--
DT-EER (Drive Trace Energy Economy Rating)	0.204	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.38	--
HCHO (Formaldehyde)	0.0003	--
MFR FE (Manufacturer Fuel Economy)	15.837	15.837
NOX (Nitrogen Oxide)	0.024	--
N2O (Nitrous Oxide)	0.003	--
HC-NM (Non-methane Hydrocarbon)	0.017	--
NMOG (Non-methane organic gases)	0.0187	--
PM (Particulate Matter)	0.00035	--
HC-TOTAL (Total Hydrocarbon)	0.03	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	547	548

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	546.013	--

Certification Summary Information Report

Test Group	VASXV05.2AMV	Evaporative/Refueling Family	VASXR0160T3A

Manufacturer Test Comments 2025MY Vanquish EDV additional results required due to new business rules following the removal of the umlaut character from the lab address

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 125	CO	1.13	--	--	--	0.10	--	1.2	2.1	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	CO-COMP	0.87	--	--	--	0	--	0.9	4.2	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	CREE	548	--	--	--	0.000	--	548	--	--
Fed	150,000 miles	Federal Tier 3 Bin 125	METHANE	0.013	--	--	--	0	--	0.01	0.03	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	N2O	0.003	--	--	--	0	--	0.00	0.01	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG	0.0187	1	1.10	--	0	--	0.019	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG+NOX	0.0427	--	1.10	--	--	--	0.043	0.125	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG+NOX-COMP	0.0545	--	1.10	--	0	--	0.054	0.060	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NOX	0.0240	--	--	--	0	--	0.024	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV125	CO	1.13	--	--	--	0.10	--	1.2	2.1	Pass
CA	150,000 miles	California LEV-IV ULEV125	CREE	548	--	--	--	0.000	--	548	--	--
CA	150,000 miles	California LEV-IV ULEV125	METHANE	0.013	--	--	--	0	--	0.01	0.03	Pass
CA	150,000 miles	California LEV-IV ULEV125	N2O	0.003	--	--	--	0	--	0.00	0.01	Pass
CA	150,000 miles	California LEV-IV ULEV125	NMOG	0.0187	1	1.10	--	0	--	0.019	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV125	NMOG+NOX	0.0427	--	1.10	--	--	--	0.043	0.125	Pass
CA	150,000 miles	California LEV-IV ULEV125	NOX	0.0240	--	--	--	0	--	0.024	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	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A

Test #	**SASX10087766**	**Test Procedure**	**11 - Cold CO**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	09/05/2024	**Fuel**	Gasoline
Fuel Batch ID	60626	**Fuel Calibration Number**	7774
Vehicle Class	LDV/Passenger Car	**DF Type**	EPA Assigned
Verify Test Lab ID	Bertrandt		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3908	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Certification Summary Information Report

Test Group	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	765.776	--
CO BAG 1 (Bag 1 Carbon Monoxide)	4.865	--
FE BAG 1 (Bag 1 Fuel Economy)	11.174	11.174
CH4 BAG 1 (Bag 1 Methane)	0.076	--
NMOG BAG 1 (Bag 1 Non-methane organic gases)	1.049	--
CO2 BAG 2 (Bag 2 Carbon Dioxide)	686.142	--
CO BAG 2 (Bag 2 Carbon Monoxide)	0.536	--
FE BAG 2 (Bag 2 Fuel Economy)	12.63	12.63
CH4 BAG 2 (Bag 2 Methane)	0.001	--
NMOG BAG 2 (Bag 2 Non-methane organic gases)	0.001	--
CO2 BAG 3 (Bag 3 Carbon Dioxide)	537.276	--
CO BAG 3 (Bag 3 Carbon Monoxide)	0.584	--
FE BAG 3 (Bag 3 Fuel Economy)	16.121	16.121
CH4 BAG 3 (Bag 3 Methane)	0.008	--
NMOG BAG 3 (Bag 3 Non-methane organic gases)	0.008	--
METHANE (CH4 - Methane)	0.019	--
CO (Carbon Monoxide)	1.45	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.468	--
DT-EER (Drive Trace Energy Economy Rating)	0.197	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.993	--
MFR FE (Manufacturer Fuel Economy)	13.054	13.054
NOX (Nitrogen Oxide)	0.028	--
HC-NM (Non-methane Hydrocarbon)	0.2	--
NMOG (Non-methane organic gases)	0.219	--
HC-TOTAL (Total Hydrocarbon)	0.217	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	661.774	--

Manufacturer Test Comments 2025MY Vanquish EDV additional properties required due to new business rules following the removal of the umlaut character from the lab address

Certification Summary Information Report

Test Group VASXV05.2AMV **Evaporative/Refueling Family** VASXR0160T3A

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	50,000 miles	Federal Tier 3 Bin 125	CO	1.4	--	--	--	0	--	1	10	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	HC-NM	0.20	--	--	--	0	--	0.2	0.3	Pass
CA	50,000 miles	California LEV-IV ULEV125	CO	1.4	--	--	--	0	--	1	10	Pass
CA	150,000 miles	California LEV-IV ULEV125	HC-NM	0.20	--	--	--	0	--	0.2	0.3	Pass

Certification Summary Information Report

Test Group	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A

Test #	**SASX10087768**	**Test Procedure**	**51 - CA fuel 50 Deg(F) exhaust test**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	09/10/2024	**Fuel**	Gasoline
Fuel Batch ID	60626	**Fuel Calibration Number**	7774
Vehicle Class	LDV/Passenger Car	**DF Type**	EPA Assigned
Verify Test Lab ID	Bertrandt		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3861	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO (Carbon Monoxide)	1.159	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.19	--
DT-EER (Drive Trace Energy Economy Rating)	0.308	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.996	--
HCHO (Formaldehyde)	0.0003	--
MFR FE (Manufacturer Fuel Economy)	15.198	15.198
NOX (Nitrogen Oxide)	0.026	--
NMOG (Non-methane organic gases)	0.052	--
PM (Particulate Matter)	0.0008	--
HC-TOTAL (Total Hydrocarbon)	0.061	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	568.913	--

Manufacturer Test Comments 2025MY Vanquish EDV additional fuel properties required due to new business rules following the removal of the umlaut character from the lab address

Certification Summary Information Report

Test Group VASXV05.2AMV **Evaporative/Refueling Family** VASXR0160T3A

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
CA	50,000 miles	California LEV-IV ULEV125	CO	1.16	--	--	--	0	--	1.2	2.1	Pass
CA	50,000 miles	California LEV-IV ULEV125	NMOG	0.0520	--	1.10	--	0	--	0.052	999.999	Pass
CA	50,000 miles	California LEV-IV ULEV125	NMOG+NOX	0.0780	1	1.10	--	--	--	0.08	0.25	Pass
CA	50,000 miles	California LEV-IV ULEV125	NOX	0.0260	--	--	--	0	--	0.026	999.999	Pass

Certification Summary Information Report

Test Group	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A

Test #	**SASX10087764**	**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	09/04/2024	**Fuel**	Gasoline
Fuel Batch ID	60626	**Fuel Calibration Number**	7774
Vehicle Class	LDV/Passenger Car	**DF Type**	EPA Assigned
Verify Test Lab ID	Bertrandt		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3823	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0	--
CO (Carbon Monoxide)	0.154	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.922	--
DT-EER (Drive Trace Energy Economy Rating)	-0.086	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.229	--
MFR FE (Manufacturer Fuel Economy)	28.207	28.207
NOX (Nitrogen Oxide)	0.003	--
NMOG (Non-methane organic gases)	0.001	--
HC-TOTAL (Total Hydrocarbon)	0.001	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	307	307

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	307.364	--

Manufacturer Test Comments 2025MY Vanquish EDV additional fuel properties and Methane result required due to new business rules following the removal of the umlaut character from the lab address

Certification Summary Information Report

Test Group VASXV05.2AMV **Evaporative/Refueling Family** VASXR0160T3A

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 125	CREE	307	--	--	--	0.00	--	307	--	--
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG	0.0010	--	1.10	--	0	--	0.001	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NMOG+NOX	0.0040	--	1.10	--	--	--	0.004	0.125	Pass
Fed	150,000 miles	Federal Tier 3 Bin 125	NOX	0.0030	--	--	--	0	--	0.003	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV125	CREE	307	--	--	--	0.00	--	307	--	--
CA	150,000 miles	California LEV-IV ULEV125	NMOG	0.0010	--	1.10	--	0	--	0.001	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV125	NMOG+NOX	0.0040	--	1.10	--	--	--	0.004	0.125	Pass
CA	150,000 miles	California LEV-IV ULEV125	NOX	0.0030	--	--	--	0	--	0.003	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	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A

Test #	**SASX10087765**	**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	09/04/2024	**Fuel**	Gasoline
Fuel Batch ID	60626	**Fuel Calibration Number**	7774
Vehicle Class	LDV/Passenger Car	**DF Type**	EPA Assigned
Verify Test Lab ID	Bertrandt		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3844	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Certification Summary Information Report

Test Group	VASXV05.2AMV	Evaporative/Refueling Family	VASXR0160T3A

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	693.848	--
CO BAG 1 (Bag 1 Carbon Monoxide)	0.729	--
FE BAG 1 (Bag 1 Fuel Economy)	12.483	12.483
CH4 BAG 1 (Bag 1 Methane)	0.008	--
NMOG BAG 1 (Bag 1 Non-methane organic gases)	0.017	--
CO2 BAG 2 (Bag 2 Carbon Dioxide)	388.903	--
CO BAG 2 (Bag 2 Carbon Monoxide)	0.378	--
FE BAG 2 (Bag 2 Fuel Economy)	22.271	22.271
CH4 BAG 2 (Bag 2 Methane)	0.008	--
NMOG BAG 2 (Bag 2 Non-methane organic gases)	0.027	--
METHANE (CH4 - Methane)	0.008	--
CO (Carbon Monoxide)	0.455	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.7	--
DT-EER (Drive Trace Energy Economy Rating)	-0.88	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.01	--
MFR FE (Manufacturer Fuel Economy)	18.977	18.977
NOX (Nitrogen Oxide)	0.072	--
HC-NM (Non-methane Hydrocarbon)	0.024	--
NMOG (Non-methane organic gases)	0.025	--
PM (Particulate Matter)	0.0002	--
HC-NM+NOX (SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03)	0.096	--
HC-TOTAL (Total Hydrocarbon)	0.032	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	456.411	--

Manufacturer Test Comments 2025MY Vanquish EDV additional fuel properties and test results required due to new business rules following the removal of the umlaut character from the lab address

Certification Summary Information Report

Test Group VASXV05.2AMV **Evaporative/Refueling Family** VASXR0160T3A

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 125	CO	0.46	--	--	--	0	--	0.5	9.6	Pass
CA	150,000 miles	California LEV-IV ULEV125	CO	0.46	--	--	--	0	--	0.5	9.6	Pass

Certification Summary Information Report

Test Group	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A

Test #	**SASX10087767**	**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	09/11/2024	**Fuel**	Gasoline
Fuel Batch ID	60626	**Fuel Calibration Number**	7774
Vehicle Class	LDV/Passenger Car	**DF Type**	EPA Assigned
Verify Test Lab ID	Bertrandt		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4040	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.009	--
CO (Carbon Monoxide)	0.831	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.045	--
DT-EER (Drive Trace Energy Economy Rating)	0.225	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.272	--
MFR FE (Manufacturer Fuel Economy)	12.748	12.748
NOX (Nitrogen Oxide)	0.017	--
HC-NM (Non-methane Hydrocarbon)	0.016	--
NMOG (Non-methane organic gases)	0.0165	--
HC-NM+NOX (SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03)	0.033	--
HC-TOTAL (Total Hydrocarbon)	0.025	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	679.245	--

Manufacturer Test Comments 2025MY Vanquish EDV additional fuel properties and Methane result required due to new business rules following the removal of the umlaut character from the lab address

Certification Summary Information Report

Test Group VASXV05.2AMV **Evaporative/Refueling Family** VASXR0160T3A

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 125	CO	0.83	--	--	--	0	--	0.8	2.1	Pass
CA	150,000 miles	California LEV-IV ULEV125	CO	0.83	--	--	--	0	--	0.8	2.1	Pass

Certification Summary Information Report

Test Group	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A

Emission Data Vehicle Information

Vehicle ID / Configuration	564TT5477 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	NASXV04.0AES	**Original Evaporative/Refueling Family**	NASXR0160T3A
Original Test Vehicle Model Year	2022		

Vehicle Model

Represented Test Vehicle Make	Aston Martin	**Represented Test Vehicle Model**	DB11 V8

Leak Family Details

Leak Family Identifier	001	**Leak Family Name**	NASXR0160T3A-001

Drive Sources and Fuel System Details

Drive Source and Fuel#	Drive Source	Fuel
1	Combustion Engine	Gasoline

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	--	**Rechargeable Energy Storage System Indicator**	--
Rechargeable Energy Storage System	--	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	--		
Odometer Correction -- Initial	0	**Odometer Correction Factor**	0.9999
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Miles		
Engine Code	177950	**Rated Horsepower**	535
Displacement (liters)	4		
Air Aspiration Method	Turbocharged	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	2	**Air Aspiration Device Configuration**	Parallel
Charge Air Cooler Type	Liquid	**Drive Mode While Testing**	2-Wheel Drive, Rear
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	3891	**Equivalent Test Weight (pounds)**	4500
GVWR (lbs)	--	**N/V Ratio**	22.2
Axle Ratio	2.7		
Transmission Type	Semi-Automatic	**# of Transmission Gears**	8
Transmission Lockup	Yes	**Creeper Gear**	No

Test Group	VASXV05.2AMV	Evaporative/Refueling Family	VASXR0160T3A

Dynamometer Coefficients:

Coefficient Category	Target Coefficients A (lbf)	Target Coefficients B (lbf/mph)	Target Coefficients C (lbf/mph**2)	Set Coefficients A (lbf)	Set Coefficients B (lbf/mph)	Set Coefficients C (lbf/mph**2)	EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
City/Highway/Evap	40.94	0.0169	0.0271	11.26	0.0919	0.0251	14.6
Cold CO	45.51	0.0188	0.0301	15.8	0.0937	0.0281	N/A
US06	40.94	0.0169	0.0271	11.26	0.0919	0.0251	N/A

Emission Control Device Comments --

Manufacturer Test Vehicle Comments 2022MY DB11 V8 Coupe 8 speed auto

Test #	**NASX10082352**	**Test Procedure**	**34 - Federal fuel 3-day evap**
Exhaust Test # for this Evap Test	NASX10082350	**Test Fuel Type**	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	06/29/2022	**Fuel**	Gasoline
Fuel Batch ID	43987	**Fuel Calibration Number**	4216
Vehicle Class	N/A	**DF Type**	EPA Assigned
Verify Test Lab ID	IDIADA Automotive Technology SA		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	4369	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.245	--

Manufacturer Test Comments Common PC Evap 3DD Update for 24MY

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.2450	0.0021	0.247	0.300	Pass

Certification Summary Information Report

Test Group	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A

Test #	**NASX10071584**	**Test Procedure**	**24 - Federal fuel refueling test (ORVR)**
Exhaust Test # for this Evap Test	NASX10071583	**Test Fuel Type**	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	05/13/2021	**Fuel**	Gasoline
Fuel Batch ID	38321	**Fuel Calibration Number**	2255
Vehicle Class	N/A	**DF Type**	EPA Assigned
Verify Test Lab ID	IDIADA Automotive Technology SA		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4095	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.106	--

Manufacturer Test Comments 2022MY T3A Common ORVR

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.11	0.0063	0.1	0.2	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.11	0.0063	0.1	0.2	Pass

Certification Summary Information Report

Test Group	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A

Test #	**NASX10082351**	**Test Procedure**	**32 - Federal Fuel Running Loss**
Exhaust Test # for this Evap Test	NASX10082350	**Test Fuel Type**	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	06/29/2022	**Fuel**	Gasoline
Fuel Batch ID	43987	**Fuel Calibration Number**	4216
Vehicle Class	N/A	**DF Type**	EPA Assigned
Verify Test Lab ID	IDIADA Automotive Technology SA		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	4369	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

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

Manufacturer Test Comments Common PC Evap RLS Update for 24MY

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.001	0	0.00	0.05	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.001	0	0.00	0.05	Pass

Certification Summary Information Report

Test Group	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A

Emission Data Vehicle Information

Vehicle ID / Configuration	8001PT8342 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	MASXJ04.0AEX	**Original Evaporative/Refueling Family**	MASXR0160P1Y
Original Test Vehicle Model Year	2021		

Vehicle Model

Represented Test Vehicle Make	Aston Martin	**Represented Test Vehicle Model**	DBX

Leak Family Details

Leak Family Identifier	--	**Leak Family Name**	--

Drive Sources and Fuel System Details

Drive Source and Fuel#	Drive Source	Fuel
1	Combustion Engine	Gasoline

Hybrid Indicator	No		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	--	**Rechargeable Energy Storage System Indicator**	--
Rechargeable Energy Storage System	--	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	--		
Odometer Correction -- Initial	0	**Odometer Correction Factor**	0.9999
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Miles		
Engine Code	177950	**Rated Horsepower**	550
Displacement (liters)	4		
Air Aspiration Method	Turbocharged	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	2	**Air Aspiration Device Configuration**	Parallel
Charge Air Cooler Type	Liquid	**Drive Mode While Testing**	4-Wheel Drive
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	5082	**Equivalent Test Weight (pounds)**	5500
GVWR (lbs)	--	**N/V Ratio**	21
Axle Ratio	3.06		
Transmission Type	Automatic	**# of Transmission Gears**	9
Transmission Lockup	Yes	**Creeper Gear**	No

Certification Summary Information Report

Test Group	VASXV05.2AMV	Evaporative/Refueling Family	VASXR0160T3A

Dynamometer Coefficients:

Coefficient Category	Target Coefficients A (lbf)	Target Coefficients B (lbf/mph)	Target Coefficients C (lbf/mph**2)	Set Coefficients A (lbf)	Set Coefficients B (lbf/mph)	Set Coefficients C (lbf/mph**2)	EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
City/Highway/Evap	77.33	-0.2033	0.0347	51.64	-0.6349	0.0384	20.5
Cold CO	85.06	-0.2236	0.0382	51.8	-0.4548	0.0399	N/A
US06	77.33	-0.2033	0.0347	51.64	-0.6349	0.0384	N/A

Emission Control Device Comments --

Manufacturer Test Vehicle Comments 2022MY DBX LDT4

Test #	**MASX10071437**	**Test Procedure**	**65 - Evap Canister Bleed Test**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	03/18/2020	**Fuel**	Gasoline
Fuel Batch ID	HJ2103	**Fuel Calibration Number**	6606
Vehicle Class	N/A	**DF Type**	EPA Assigned
Verify Test Lab ID	IDIADA Automotive Technology SA		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	4400	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0175	--

Manufacturer Test Comments BETP AML result

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.018	0	0.02	0.02	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.018	0	0.02	0.02	Pass

Certification Summary Information Report

Test Group	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A

Test #	**MASX10071438**	**Test Procedure**	**66 - Leak Test - Evap Fuel System OBD**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)
Test Date	11/25/2020	**Fuel**	Gasoline
Fuel Batch ID	HJ2103	**Fuel Calibration Number**	6606
Vehicle Class	N/A	**DF Type**	EPA Assigned
Verify Test Lab ID	IDIADA Automotive Technology SA		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	5130	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
LEAK-DIA (Effective Leak Diameter (inches))	0.003	--

Manufacturer Test Comments AML common Leak Test result

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	LEAK-DIA	0.003	0	0.00	0.02	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	LEAK-DIA	0.003	0	0.00	0.02	Pass

Test Group	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A

Fuel Properties

Fuel Batch ID	**60626**	**Fuel Calibration Number**	**7774**
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	08/24/2023
Fuel Batch Calibration Effective Date	09/21/2023	**Fuel Batch Calibration Ineffective Date**	09/21/2025
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	0.825	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.754
Fuel Ethanol Volume Percent (%)	9.7	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	--
Fuel Net Heat of Combustion (E10) (MJ/kg)	41.72	**Fuel Carbon Mass Fraction (E10)**	0.825
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	--	**Weight Fraction CO2**	--

Fuel Batch ID	**38321**	**Fuel Calibration Number**	**2255**
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	12/11/2020
Fuel Batch Calibration Effective Date	12/11/2020	**Fuel Batch Calibration Ineffective Date**	12/11/2023
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	0.866	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.754
Fuel Ethanol Volume Percent (%)	9.9	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17921
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.866	**Weight Fraction CO2**	--

Fuel Batch ID	**43987**	**Fuel Calibration Number**	**4216**
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	04/06/2022
Fuel Batch Calibration Effective Date	04/06/2022	**Fuel Batch Calibration Ineffective Date**	04/06/2024
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	0.83	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.752
Fuel Ethanol Volume Percent (%)	10	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17807
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.83	**Weight Fraction CO2**	--

Fuel Batch ID	**HJ2103**	**Fuel Calibration Number**	**6606**
Test Fuel Type	49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	11/14/2019

Certification Summary Information Report

Test Group	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A
Fuel Batch Calibration Effective Date	11/14/2019	**Fuel Batch Calibration Ineffective Date**	11/14/2022
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	0.832	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.753
Fuel Ethanol Volume Percent (%)	9.7	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17996
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.832	**Weight Fraction CO2**	--

Certification Summary Information Report

Test Group	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A

Consolidated List of Standards

Exhaust Standards

Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	LDV/Passenger Car	**Standard Level**	Federal Tier 3 Bin 125
Fuel	Gasoline	**Test Procedure**	Federal fuel 2-day exhaust (w/can load)

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	0.10	2.1
150,000 miles	CO-COMP	--	--	--	--	--	--	0	4.2
150,000 miles	CREE	--	--	--	--	--	--	0.000	999.999
150,000 miles	METHANE	--	--	--	--	--	--	0	0.03
150,000 miles	N2O	--	--	--	--	--	--	0	0.01
150,000 miles	NMOG	--	1	1.10	--	--	--	0	999.999
150,000 miles	NMOG+NOX	--	--	1.10	--	--	--	0	0.125
150,000 miles	NMOG+NOX-COMP	--	--	1.10	--	--	--	0	0.060
150,000 miles	NOX	--	--	--	--	--	--	0	999.999
150,000 miles	PM	--	--	--	--	--	--	--	0.003

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	LDV/Passenger Car	**Standard Level**	California LEV-IV ULEV125
Fuel	Gasoline	**Test Procedure**	Federal fuel 2-day exhaust (w/can load)

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	0.10	2.1
150,000 miles	CREE	--	--	--	--	--	--	0.000	999.999
150,000 miles	METHANE	--	--	--	--	--	--	0	0.03
150,000 miles	N2O	--	--	--	--	--	--	0	0.01
150,000 miles	NMOG	--	1	1.10	--	--	--	0	999.999
150,000 miles	NMOG+NOX	--	--	1.10	--	--	--	0	0.125
150,000 miles	NOX	--	--	--	--	--	--	0	999.999
150,000 miles	PM	--	--	--	--	--	--	--	0.003

Certification Summary Information Report

Test Group	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	LDV/Passenger Car	**Standard Level**	California LEV-IV ULEV125
Fuel	Gasoline	**Test Procedure**	CA fuel 50 Deg(F) exhaust test

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
50,000 miles	CO	--	--	--	--	--	--	0	2.1
50,000 miles	NMOG	--	--	1.10	--	--	--	0	999.999
50,000 miles	NMOG+NOX	--	1	1.10	--	--	--	0	0.25
50,000 miles	NOX	--	--	--	--	--	--	0	999.999

Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	LDV/Passenger Car	**Standard Level**	Federal Tier 3 Bin 125
Fuel	Gasoline	**Test Procedure**	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	10
150,000 miles	HC-NM	--	--	--	--	--	--	0	0.3

Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	LDV/Passenger Car	**Standard Level**	Federal Tier 3 Bin 125
Fuel	Gasoline	**Test Procedure**	SC03

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	0	2.1
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	0	0.125

Certification Summary Information Report

Test Group	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A

Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	LDV/Passenger Car	**Standard Level**	Federal Tier 3 Bin 125
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	--	--	--	--	--	--	0.00	999.999
150,000 miles	NMOG	--	--	1.10	--	--	--	0	999.999
150,000 miles	NMOG+NOX	--	--	1.10	--	--	--	0	0.125
150,000 miles	NOX	--	--	--	--	--	--	0	999.999

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	LDV/Passenger Car	**Standard Level**	California LEV-IV ULEV125
Fuel	Gasoline	**Test Procedure**	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	--	--	--	--	--	--	0.00	999.999
150,000 miles	NMOG	--	--	1.10	--	--	--	0	999.999
150,000 miles	NMOG+NOX	--	--	1.10	--	--	--	0	0.125
150,000 miles	NOX	--	--	--	--	--	--	0	999.999

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Cert
Vehicle Class	LDV/Passenger Car	**Standard Level**	California LEV-IV ULEV125
Fuel	Gasoline	**Test Procedure**	SC03

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	0	2.1
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0	0.125

Certification Summary Information Report

Test Group VASXV05.2AMV **Evaporative/Refueling Family** VASXR0160T3A

Cert Region Federal **Cert/In-Use Code** Cert
Vehicle Class LDV/Passenger Car **Standard Level** Federal Tier 3 Bin 125
Fuel Gasoline **Test Procedure** US06

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	0	9.6
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0	0.15
150,000 miles	PM	--	--	--	--	--	--	--	0.006

Cert Region California + CAA Section 177 states **Cert/In-Use Code** Cert
Vehicle Class LDV/Passenger Car **Standard Level** California LEV-IV ULEV125
Fuel Gasoline **Test Procedure** 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	9.6
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0	0.15
150,000 miles	PM	--	--	--	--	--	--	--	0.006

Cert Region California + CAA Section 177 states **Cert/In-Use Code** Cert
Vehicle Class LDV/Passenger Car **Standard Level** California LEV-IV ULEV125
Fuel Gasoline **Test Procedure** Cold CO

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
50,000 miles	CO	--	--	--	--	--	--	0	10
150,000 miles	HC-NM	--	--	--	--	--	--	0	0.3

Evaporative/Refueling Standards

Evaporative/Refueling Family VASXR0160T3A **Cert Region** Federal
Cert/In-Use Code Cert **Standard Level** Federal Tier 3 Evap
Test Procedure Federal Fuel Running Loss

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.05	0

Certification Summary Information Report

Test Group	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A

Evaporative/Refueling Family	VASXR0160T3A	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**Standard Level**	California LEV-IV Zero Evap (Option 2)
Test Procedure	Federal Fuel Running Loss		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.05	0

Evaporative/Refueling Family	VASXR0160T3A	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**Standard Level**	California LEV-IV Zero Evap (Option 2)
Test Procedure	Federal fuel 3-day evap		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.300	0.0021

Evaporative/Refueling Family	VASXR0160T3A	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Leak Test - Evap Fuel System OBD		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	LEAK-DIA	--	0.02	0

Evaporative/Refueling Family	VASXR0160T3A	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Evap Canister Bleed Test		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.02	0

Evaporative/Refueling Family	VASXR0160T3A	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Federal fuel refueling test (ORVR)		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.2	0.0063

Certification Summary Information Report

Test Group	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A

Evaporative/Refueling Family	VASXR0160T3A	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**Standard Level**	California LEV-IV Zero Evap (Option 2)
Test Procedure	Evap Canister Bleed Test		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.02	0

Evaporative/Refueling Family	VASXR0160T3A	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**Standard Level**	California LEV-IV Zero Evap (Option 2)
Test Procedure	Leak Test - Evap Fuel System OBD		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	LEAK-DIA	--	0.02	0

Evaporative/Refueling Family	VASXR0160T3A	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Cert	**Standard Level**	California LEV-IV Zero Evap (Option 2)
Test Procedure	Federal fuel refueling test (ORVR)		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.2	0.0063

Evaporative/Refueling Family	VASXR0160T3A	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Federal fuel 3-day evap		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL	--	0.300	0.0021

Certification Summary Information Report

Test Group	VASXV05.2AMV	Evaporative/Refueling Family	VASXR0160T3A

Glossary

Useful Life

4	4,000 miles	120	120,000 miles
50	50,000 miles	150	150,000 miles
100	100,000 miles		

Emission Name

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

Certification Summary Information Report

Test Group	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A
ACT-DISTANCE	Actual Distance Driven (miles)	WATT-HRS BAG 3	Bag 3 Watt Hours
AS-VOLT	Average System Voltage	WATT-HRS BAG 4	Bag 4 Watt Hours
CO2 BAG 1	Bag 1 Carbon Dioxide	WATT-HRS	Watt Hours
CO2 BAG 2	Bag 2 Carbon Dioxide	HC-NM BAG 1	Bag 1 Non-methane Hydrocarbon
CO2 BAG 3	Bag 3 Carbon Dioxide	HC-NM BAG 2	Bag 2 Non-methane Hydrocarbon
CO2 BAG 4	Bag 4 Carbon Dioxide	HC-NM BAG 3	Bag 3 Non-methane Hydrocarbon
NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides	HC-NM BAG 4	Bag 4 Non-methane Hydrocarbon
NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides	N2O BAG 1	Bag 1 Nitrous Oxide
DT-IWRR	Drive Trace Inertia Work Ratio Rating	N2O BAG 2	Bag 2 Nitrous Oxide
DT-ASCR	Drive Trace Absolute Speed Change Rating	N2O BAG 3	Bag 3 Nitrous Oxide
DT-EER	Drive Trace Energy Economy Rating	N2O BAG 4	Bag 4 Nitrous Oxide

Certification Region			
CA	California + CAA Section 177 states	FA	Federal

Exhaust Emission Standard Level			
B1	Federal Tier 2 Bin 1	HDV2B340	Federal Tier 3 HD Class 2b Transitional Bin 340
B2	Federal Tier 2 Bin 2	HDV2B250	Federal Tier 3 HD Class 2b Bin 250
B3	Federal Tier 2 Bin 3	HDV2B200	Federal Tier 3 HD Class 2b Bin 200
B4	Federal Tier 2 Bin 4	HDV2B170	Federal Tier 3 HD Class 2b Bin 170
B5	Federal Tier 2 Bin 5	HDV2B150	Federal Tier 3 HD Class 2b Bin 150
B6	Federal Tier 2 Bin 6	HDV2B0	Federal Tier 3 HD Class 2b Bin 0
B7	Federal Tier 2 Bin 7	HDV3B630	Federal Tier 3 HD Class 3 Transitional Bin 630
B8	Federal Tier 2 Bin 8	HDV3B570	Federal Tier 3 HD Class 3 Transitional Bin 570
B9	Federal Tier 2 Bin 9	HDV3B400	Federal Tier 3 HD Class 3 Bin 400
B10	Federal Tier 2 Bin 10	HDV3B270	Federal Tier 3 HD Class 3 Bin 270
B11	Federal Tier 2 Bin 11	HDV3B230	Federal Tier 3 HD Class 3 Bin 230
HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)	HDV3B200	Federal Tier 3 HD Class 3 Bin 200
HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)	HDV3B0	Federal Tier 3 HD Class 3 Bin 0
L2	California LEV-II LEV	L4SULEV100	California LEV-IV SULEV100
L2OP	California LEV-II LEV Optional	L4SULEV125	California LEV-IV SULEV125
U2	California LEV-II ULEV	L4SULEV15	California LEV-IV SULEV15
S2	California LEV-II SULEV	L4SULEV150	California LEV-IV SULEV150
ZEV	California ZEV	L4SULEV170	California LEV-IV SULEV170
OT	Other	L4SULEV175	California LEV-IV SULEV175
T1	Federal Tier 1	L4SULEV20	California LEV-IV SULEV20
PZEV	California PZEV	L4SULEV200	California LEV-IV SULEV200
L2LEV160	California LEV-II LEV160	L4SULEV230	California LEV-IV SULEV230
L2ULEV125	California LEV-II ULEV125	L4SULEV25	California LEV-IV SULEV25
L2SULEV30	California LEV-II SULEV30	L4SULEV30	California LEV-IV SULEV30
L2LEV395	California LEV-II LEV395	L4SULEV75	California LEV-IV SULEV75

Certification Summary Information Report

Test Group	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A
L2ULEV340	California LEV-II ULEV340	L4SULEV85	California LEV-IV SULEV85
L2LEV630	California LEV-II LEV630	L4ULEV125	California LEV-IV ULEV125
L2ULEV570	California LEV-II ULEV570	L4ULEV200	California LEV-IV ULEV200
L3LEV160	California LEV-III LEV160	L4ULEV250	California LEV-IV ULEV250
L3ULEV125	California LEV-III ULEV125	L4ULEV270	California LEV-IV ULEV270
L3ULEV70	California LEV-III ULEV70	L4ULEV40	California LEV-IV ULEV40
L3ULEV50	California LEV-III ULEV50	L4ULEV400	California LEV-IV ULEV400
L3SULEV30	California LEV-III SULEV30	L4ULEV50	California LEV-IV ULEV50
L3SULEV20	California LEV-III SULEV20	L4ULEV60	California LEV-IV ULEV60
L3LEV395	California LEV-III LEV395	L4ULEV70	California LEV-IV ULEV70
L3ULEV340	California LEV-III ULEV340	T4B170	Federal Tier 4 MDV Bin 170
L3ULEV250	California LEV-III ULEV250	T4B150	Federal Tier 4 MDV Bin 150
L3ULEV200	California LEV-III ULEV200	T4B125	Federal Tier 4 MDV Bin 125
L3SULEV170	California LEV-III SULEV170	T4B100	Federal Tier 4 MDV Bin 100
L3SULEV150	California LEV-III SULEV150	T4B85	Federal Tier 4 MDV Bin 85
L3LEV630	California LEV-III LEV630	T4B75	Federal Tier 4 MDV Bin 75
L3ULEV570	California LEV-III ULEV570	T4B70	Federal Tier 4 Bin 70
L3ULEV400	California LEV-III ULEV400	T4B65	Federal Tier 4 Bin 65
L3ULEV270	California LEV-III ULEV270	T4B60	Federal Tier 4 Bin 60
L3SULEV230	California LEV-III SULEV230	T4B55	Federal Tier 4 Bin 55
L3SULEV200	California LEV-III SULEV200	T4B50	Federal Tier 4 Bin 50
T3B160	Federal Tier 3 Bin 160	T4B45	Federal Tier 4 Bin 45
T3B125	Federal Tier 3 Bin 125	T4B40	Federal Tier 4 Bin 40
T3B110	Federal Tier 3 Transitional Bin 110	T4B35	Federal Tier 4 Bin 35
T3B85	Federal Tier 3 Transitional Bin 85	T4B30	Federal Tier 4 Bin 30
T3SULEV30	Federal Tier 3 Transitional LEV-II SULEV30 Carryover	T4B25	Federal Tier 4 Bin 25
T3B70	Federal Tier 3 Bin 70	T4B20	Federal Tier 4 Bin 20
T3B50	Federal Tier 3 Bin 50	T4B15	Federal Tier 4 Bin 15
T3B30	Federal Tier 3 Bin 30	T4B10	Federal Tier 4 Bin 10
T3B20	Federal Tier 3 Bin 20	T4B5	Federal Tier 4 Bin 5
T3B0	Federal Tier 3 Bin 0	T4B0	Federal Tier 4 Bin 0
HDV2B395	Federal Tier 3 HD Class 2b Transitional Bin 395		

Transmission Type Code			
AMS	Automated Manual- Selectable (e.g. Automated Manual with paddles)	M	Manual
A	Automatic	OT	Other
AM	Automated Manual	SA	Semi-Automatic
CVT	Continuously Variable	SCV	Selectable Continuously Variable (e.g. CVT with paddles)

Drive System Code			
4	4-Wheel Drive	P	Part-time 4-Wheel Drive

Certification Summary Information Report

Test Group	VASXV05.2AMV	**Evaporative/Refueling Family**	VASXR0160T3A
F	2-Wheel Drive, Front	A	All Wheel Drive
R	2-Wheel Drive, Rear		

Additional Terms and Acronyms

AFC	Alternative Fuel Converter	ICI	Independent Commercial Importer
CSI	Certificate Summary Information	ORVR	Onboard Refueling Vapor Recovery
DF	Deterioration Factor	SIL	Shift Indicator Light
Evap	Evaporation, Evaporative	Trans	Transmission

8. Emission Testing Waiver Statements

8.1. **Data submittal waiver for high-altitude exhaust emission compliance**

Based on our engineering evaluation of high-altitude emissions testing conducted at SGS Engineering, Aurora, CO, we can state as manufacturer that all light-duty vehicles included in the this application comply with the applicable emission standards at high altitude.
According to 40 CFR § 86.1829-15 (c) we waive the data submittal on the basis of this statement.

8.2. **Data submittal waiver for 2DD (Supplemental) Evaporative Loss testing**

Based on our engineering evaluation of 2DD testing for EU markets using E10 fuel on our light duty vehicles and on evaluation of the US 2DD sequence performance on the largely similar system design on our LDT vehicle, and in accord with the flexibility in 40CFR 86.1829-15(e)(6,) we state as the manufacturer that all light duty vehicles in this application demonstrate compliance with the standard for the supplemental two diurnal test sequence.

8.3. **Data submittal waiver for CST exhaust emission compliance**

Based on our engineering evaluation of appropriate CST testing and I/M testing we state as the manufacturer that all light-duty vehicles included in the respective applications comply with the applicable CST and I/M emission standards.
According to 40 CFR § 86.1829-01 (b)(4)(ii) we waive the data submittal on the basis of this statement.

8.4. **Data submittal waiver for Idle CO Testing**

Based on our engineering evaluation of appropriate Idle CO emissions we state as the manufacturer, that all light-duty vehicles included in this applications comply with the applicable idle CO emission standards.
According to 40 CFR § 86.1829-01 (b)(5)(ii) we waive the data submittal on the basis of this statement.

8.5 **Data submittal waiver for HCHO (Formaldehyde) Testing**

Based on our engineering evaluation of appropriate NMHC test data we state as the manufacturer of light duty vehicles included in the respective applications comply with the HCHO standards.
According to 40 CFR § 86.1829-01 (b)(iii)(F) we waive the data submittal on the basis of this statement.

9 OBD General Description

9.1. OBD II hardware, software, and algorithms are based to the largest degree possible upon approved Bosch Engineering OBD II systems. There are, of course, some unique features of the Aston Martin engine/system that require unique hardware or algorithms. The OBD II system descriptions, thresholds, entry and exit conditions etc., are contained within Section 16 – Confidential Information.

9.2 OBD Approval Letter

Please refer to the OBD approval letter for this test group added to Efiles & EV-CIS

11. AECD Descriptions

The Aston Martin Lagonda Ltd Test Group – VASXV05.2AMV uses a twin Bosch ME17.8.31 control system which is a unique system for Aston Martin. The AECD nomenclature and descriptions are shown in the chart included in Section 16 - Confidential information.

12. Description of Vehicles and Test Parameters Covered by Certificate

12.1. Vehicle Parameters

12.1.1	Carline (s)	370 - Vanquish 382 - Vanquish Volante
12.1.2.	Vehicle Classification	LDV
12.1.3.	Emission Control System Description:	
12.1.3.1.	Catalyst	
	Type:	Three-Way Catalyst
	Number:	4
		2 catalysts/bank, 1 primary warm up and 1 secondary
12.1.3.2.	EGR type	Not Applicable
12.1.3.3.	Air pump type	Electric
12.1.3.4.	Fuel system type	Sequential Multipoint Electronic Fuel Injection
12.1.3.5.	Intake air aspiration method	Turbocharged, 1 per bank
12.1.3.6.	Other	Not Applicable
12.1.4.	Engine Code	AE31/
12.1.5.	Number of valves per cylinder	4
12.1.6.	Engine Displacement	5204 cm³ (318 in.³).

12.1.7.	Sales area	FA & CA
12.1.8.	Transmission and overdrive	ZF8HP95 A8 - Vanquish
12.1.9.	Shift indicator light	Equipped, not shifted by SIL
12.1.10.	Tire Size	275/35R21(F) 325/30R21(R)
12.1.11.	N/V Ratio	22.6 Vanquish
12.1.12.	Equivalent test weight	4500 lbs Vanquish 4750lbs Vanquish Volante
12.1.13.	Fuel tank volume	20.6 US Gallons

12.2. Test Parameters

12.2.1 Engine Start/Stop Procedures

For auto transmission types:
Ensure the key fob is present in the vehicle. Check that the E Brake is set. Depress the brake pedal. The Start button will glow red, indicating the engine is ready for the start. Momentarily press the start button to start. Press and hold for a quiet start.

To stop the engine, select P (select Neutral) and push the start button. Ensure the E Brake is set. The engine will stop and the steering lock will engage soon after. Remove the key fob from the vehicle to prevent battery drain when the vehicle is not in use. Taking the key fob away from the vehicle while the engine is running will not stop the engine, but if the engine is stopped by pressing the start button, it cannot be re-started until the key fob is again in the proximity of the vehicle interior.

12.2.2. Shift Schedules

12.2.2.1. The shift schedules are in accordance with 40 CFR §86.128-79 and A/C No. 72 A.

EPA Shift Schedules:

Vanquish 8 speed auto Config 00 - program Auto shift schedule

12.2.3. Dynamometer Loading Information

For Emissions and Fuel Economy:

Model	ETW (lbs)	Tire Size	Target Coefficients			Set Coefficients		
			A	B	C	a	b	c
Vanquish	4500	325/30R21	49.17	0.3527	0.0226	-0.57	-0.0029	0.0128
Vanquish Volante	4750	325/30R21	48.74	0.4779	0.0205	2.16	0.098	0.2

12.2.4. Evaporative / Refuelling Family VASXR0160T3A

Fuel Tank Temperature Profile

sec.	Corrected Tank 1 (EPA,95˚F)	Corrected Vapor 1 (EPA,95˚F)	Corrected Tank 1 (CARB,105˚F)	Corrected Vapor 1 (CARB,105˚F)
0.	95	95	105	105
60	95.1	95.4	105.1	105.4
120	95.2	95.7	105.2	105.7
180	95.4	96.2	105.4	106.2
240	95.7	96.5	105.7	106.5
300	96.1	96.9	106.1	106.9
360	96.3	97.3	106.3	107.3
420	96.7	97.7	106.7	107.7
480	97	98	107	108
540	97.2	98.5	107.2	108.5
600	97.6	98.9	107.6	108.9
660	97.9	99.4	107.9	109.4
720	98.2	99.7	108.2	109.7
780	98.6	100	108.6	110
840	99	100.3	109	110.3
900	99.3	100.8	109.3	110.8
960	99.7	101.2	109.7	111.2
1020	100	101.7	110	111.7
1080	100.4	102	110.4	112
1140	100.7	102.4	110.7	112.4
1200	101.2	102.7	111.2	112.7
1260	101.6	102.9	111.6	112.9
1320	102.1	103.4	112.1	113.4
1380	102.4	103.7	112.4	113.7
1440	102.8	104.1	112.8	114.1
1500	103.2	104.3	113.2	114.3
1560	103.6	104.6	113.6	114.6
1620	103.9	104.9	113.9	114.9
1680	104.3	105.3	114.3	115.3
1740	104.7	105.6	114.7	115.6
1800	105.1	106	115.1	116
1860	105.6	106.4	115.6	116.4
1920	105.9	106.6	115.9	116.6
1980	106.3	107	116.3	117
2040	106.6	107.3	116.6	117.3
2100	106.9	107.3	116.9	117.3
2160	107.3	107.7	117.3	117.7
2220	107.7	108	117.7	118
2280	108.1	108.1	118.1	118.1
2340	108.4	108.4	118.4	118.4
2400	108.7	108.8	118.7	118.8
2460	109.1	109.1	119.1	119.1
2520	109.5	109.5	119.5	119.5
2580	109.9	109.9	119.9	119.9
2640	110.1	110.2	120.1	120.2
2700	110.6	110.4	120.6	120.4
2760	111	110.8	121	120.8
2820	111.3	111.1	121.3	121.1
2880	111.6	111.5	121.6	121.5
2940	112	111.8	122	121.8
3000	112.4	112	122.4	122
3060	112.9	112.2	122.9	122.2
3120	113.3	112.7	123.3	122.7
3180	113.6	113.3	123.6	123.3
3240	114.2	113.7	124.2	123.7
3300	114.5	114.1	124.5	124.1
3360	114.8	114.3	124.8	124.3
3420	115.2	114.8	125.2	124.8
3480	115.5	115	125.5	125
3540	115.9	115.1	125.9	125.1
3600	116.2	115.7	126.2	125.7
3660	116.7	116.2	126.7	126.2
3720	117	116.8	127	126.8
3780	117.5	117.1	127.5	127.1
3840	117.8	117.4	127.8	127.4
3900	118.1	117.6	128.1	127.6
3960	118.5	117.7	128.5	127.7
4020	118.7	117.9	128.7	127.9
4080	119.1	118.2	129.1	128.2
4140	119.5	118.7	129.5	128.7
4200	119.7	118.9	129.7	128.9
4260	120.1	119.2	130.1	129.2
4308	120.5	119.7	130.5	129.7

13. Projected Sales

Confidential information, refer to Section 16, page 4.

14. Request for Certification

14.1. Statements of Compliance

This test group is certified under the small volume manufacturer provisions contained in 40CFR 86.1811-17(h) where we aim to utilise the extended Tier 3 phase in period to meet the compliance levels required therein for model years 2017 thru 2021, model years 2022 thru 2027 and then meeting the final Tier 3 NMOG+NOx standard in model year 2028.

Aston Martin Lagonda Ltd states that any element of design, system or emission control device installed on or incorporated in Aston Martin'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 Aston Martin Lagonda Ltds 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 of public health or welfare except as specifically permitted by the standards described under section 202 of the Clean Air Act.

Aston Martin Lagonda Ltd further states that any element of design, system, or emission control device installed on or incorporated in Aston Martin'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 Aston Martin's information and belief, cause or contribute to an unreasonable risk to the public safety.

The term pollutant means:

(a) Diesel particulates
(b) Nickel
(c) MMT combustion products
(d) Ammonia
(e) Sulphates
(f) Hydrogen sulphide
(g) Hydrogen cyanide
(h) Ruthenium combustion products
(i) Nitrosamines

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

The test vehicles with respect to which data are submitted are in all material respects as described in the application for certification, 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 S and later requirements contained in 40CFR Part 1066 subpart I.

The test vehicles for which certification is requested conform to the requirements in § 86.1810-01 (a), 86.1810-09 and 86.1810-17 and the description of tests performed to ascertain compliance with the general standards contained therein and the data derived from such tests are available.

The testing described under 86.1824-08 has been designed and conducted in accordance with good engineering practice to ensure that the vehicles covered by a certificate issued under 86.1848-01 and -10 will meet the Tier 3 evaporative emission standards as detailed in 86.1813-17(h) from model year 2022.

Further, in accordance with § 86.1810–01 (c)(1), Aston Martin Lagonda Ltd states that the fuel evaporative emission deterioration factors for each fuel evaporative emission family / fuel evaporative system combination and all test data that are derived from testing described under § 86.098-21(b)(4)(I) designed and conducted in accordance with good engineering practice to assure that the vehicles covered by a certificate issued under § 86.1848–10 will meet the Tier 3 evaporative emission standards for the useful life of the vehicle.

COLD CO Compliance

Aston Martin states that the vehicles described herein have been tested in accordance 40CFR part1066 Subpart H and on the basis of these tests are in conformance with that subpart. See the test group CSI in section 7 for further information.
Compliance with cold CO requirements has been achieved by extending the feedback control temperature to a lower value and optimizing fuelling for after-start enrichment.

CONTINUITY OF EMISSIONS IN THE 20° F to 86° F TEMPERATURE RANGES

Aston Martin states that there is no discontinuity in emissions of NMOG, NOx or CO measured on the federal test procedure in the 20° F to 86° F temperature ranges.

Aston Martin states that the air to fuel ratio is no richer than the leanest air to fuel mixture required to obtain maximum torque (lean best torque), plus a tolerance of four percent, except for the purposes of component protection as petitioned for by Aston Martin and as approved by the Administrator.

LEAK FREE EXHAUST

In accordance with the requirements set out in 40 CFR 86.1844-01(d)(16) Aston Martin attests that the exhaust system design facilitates leak free assembly at first installation and subsequent installations neccessitated by service needs. The catalyst downpipe assemblies are single piece with welded joints and carry industry standard oxygen sensor mountings.The joint systems employed between cylinder head and manifold and the joint face post catalyst are deformable gasket materials that are designed for the full useful life of the vehicle.

A/C DURABILITY

In accordance with the requirements of 40CFR 86.1823-08(m)(4) Aston Martin attests that the system design facilitates leak free assembly at first installation and subsequent installations neccessitated by service needs. All joints use latest industry standard features and materials and all flexible sections are optimised for surface area. System leak control capability is defined by the specifications in SAE J2727 and measured using same.

14.2. **Request for Certificate**

Aston Martin Lagonda Ltd herewith applies for a Federal Certificate of Conformity for Test Group VASXV05.2AMV

Aston Martin Lagonda Ltd herewith also applies for a California ARB Executive Order for Test Group VASXV05.2AMV

This Test Group complies with all applicable regulations contained in Title 40, Code of Federal Regulations, Part 86 and Part 1066, and the California Code of Regulations.

Simon Naughton
Senior Manager
Legislation & Certification.

15. Other Information

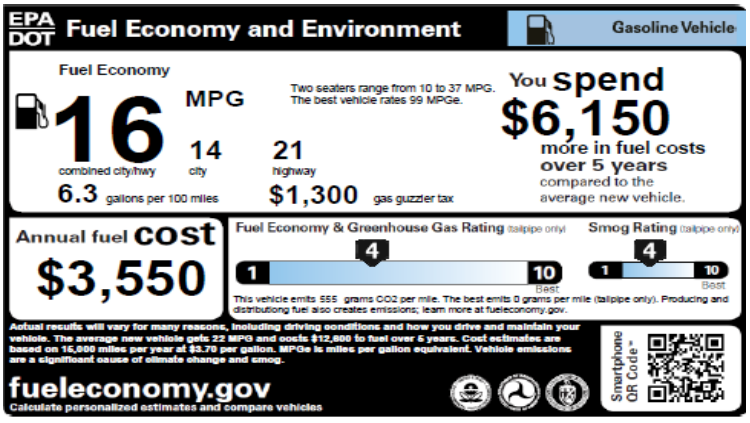
15.1. Label according to 40 CFR § 86.1807-01 and according to California Motor Vehicle Emission Control Label Specifications.

ASTON MARTIN LAGONDA LTD VEHICLE EMISSION CONTROL INFORMATION			
Conforms to regulations:		MY 2027	
US EPA:	Tier 3 BIN125 LDV	OBD II	Fuel: T3 Premium
California: LEV4 ULEV125 PC		OBD II	Fuel: T3 Premium
GROUP: VASXV05.2AMV EVAP: VASXR0160T3A		2WU-TWC/2TWC/2WR-HO2S/ 2HO2S/2TC/2CAC/SFI/AIRE	
No Adjustments Needed		VY73-973268-AA	

15.1.1. Label Location: Under the hood

15.2 Environmental Performance Label (included on the Monroney Label)

This test group will adopt the new EPA/DOT Fuel Economy and Environment label, commencing with Monroney labels produced for 2013MY vehicles.
Sample of format in use : (not the actual label for this family)



US EPA Fee Form

Help and EPA Instructions

* Required Field

General Information

Date: 12/08/2025

Process Code *
Submit New Fee Filing Form

Manufacturer Code *
ASX

Manufacturer Name *
Aston Martin Lagonda Ltd

Contact Name *
Jon Yarrow

Contact Email Address *
jon.yarrow@astonmartin.com

Contact Phone *
011 447905201903

Calendar Year complete application submitted to EPA *
2026

PLEASE NOTE: These fees apply to complete certification applications received by EPA from January 1, 2026, through December 31, 2026. The applicable fee is determined by the calendar year in which the complete certification application is received, not the model year.

Amount Owed
$32,317.00

Payment Type *
Online ACH

Comments

Engine Family / Evaporative Family / Test Group *
VASXV05.2AMV

Certificate Request Type (Industry Sector Code)

Certificate Request Type *

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

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

ICI VIN Number (Required for ICIs Only)

Do you qualify for a Reduced Fee? *
No

Payment Information

EPA Form Number 3520-29
OMB Control No. 2060-0545
Approval expires 7/31/2027
The public reporting and recordkeeping burden for this collection of information is estimated to average 12 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.

15.4. California Fee Invoice

STATE OF CALIFORNIA
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
CALIFORNIA AIR RESOURCES BOARD

MOBILE SOURCE CERTIFICATION AND COMPLIANCE FEE PAYMENT FORM FOR ON-ROAD APPLICATIONS ONLY

CARB USE ONLY

Invoice Name	MSF250580
Invoice Date	Dec 08, 2025

COMPANY INFORMATION

Company Name	Aston Martin
Address	Banbury Road
City	Gaydon
State	Warwickshire
Zip	CV35 0DB
Country	United Kingdom
Contact Name	Jon C Yarrow
Contact Telephone Number	+447905201903
Contact Email	jon.yarrow@astonmartin.com
CARB Customer Number	CCAM000006

APPLICATION INFORMATION

Payment Row Number	Product Description or File Name	Model Year/Calendar Year	Unique Application Identifier: Test Group, Engine Family, Trailer Family, Vehicle Family, ZEP Family, if applicable (ID listed in payment row must match the unique identifier given to the certification application)	Category Type	Fee Type	Amount
1	CBI_VASXV05.2AMV_APPIP	Model Year 2027	VASXV05.2AMV	Light-duty vehicle test group and medium-duty vehicle test group	Partial Carry-Over	$ 25,155.00

Total Due	$ 25,155.00

I, _____ , attest that any information provided is true, accurate, and complete.
(Responsible Party Signature Here)

17. California ARB Information

17.1. Statements

17.1.1. Label Durability

Aston Martin states that the tune up labels are designed to be durable for the vehicle's total expected life, under the conditions in the area where the labels are attached. Typical vehicle environmental conditions shall include, but are not limited to, exposure to engine lubricants and coolants, brake fluid, under hood temperatures, steam cleaning, and paints or paint solvents.

17.1.2. Fill Pipe

Aston Martin states that all vehicles meet the requirements of Title 13 Section 2235 and/or ISO13331-1995

17.1.3. Production Vehicles versus Test Vehicles

Aston Martin states that in regard to emission control systems, and all related parameters, production vehicles will be identical to the test vehicles that were used for certification testing.

17.1.4. Continuity of emissions in the temperature range of 20 to 86 Degrees F

Aston Martin states that there is no discontinuity in emissions of NMOG, CO and NOx measured on the Federal Test Procedure in the temperature range of 20 to 86 degrees F.

17.1.5. I/M Test Procedure Statement

Based on our engineering evaluation all light-duty vehicles comply with the I/M requirements at ambient temperature from 35 to 68 degrees F. (Refer to Section 8, Item 8.3, also MAC 99-05)

17.1.6. High Altitude Requirements

The ECU controlled sequential fuel injection system meters fuel based on air mass flow and is self-compensating. Therefore all Aston Martin test groups comply with the high altitude requirements. (ref. Mail Out 86-23 & 40 CFR 86.1829.15)

AML performed altitude testing on the EDV at Bertrandt Group in Munich Germany during the certification testing phase of this program.

17.1.7. Test and Service Accumulation Fuel

All fuels used for emissions certification testing (EPA Tier 3 Premium reference fuel) or service accumulation fuels comply with applicable regulations.

17.1.8. Lubricants

All lubricants used in test vehicles comply with applicable regulations. There are no differences between actual test vehicle lubricants and proposed production vehicle lubricants.

17.1.9. Test Facilities and Equipment
The facilities and equipment to be used for mileage accumulation and emissions testing comply with all applicable regulations.

17.1.10. SC03 Emission Standards - 2026 and subsequent
We attest that the NMOG+NOx and CO exhaust emissions for vehicles within this test group tested using the SC03 test procedures incorporated in the LEV 4 regulations (as detailed in 1961.4 Title 13 California Code of Regulations) meet the standards for their respective emission category.

17.1.10. Unscheduled Maintenance

17.1.10.1. Diagnostic Procedures
In the event that unscheduled maintenance on one of the certification test vehicles becomes necessary, Aston Martin uses the on-board and service diagnostic system.

17.1.10.2. Procedures for Evaluating Drivability
During mileage accumulation of certification test vehicles, at the various test facilities, all personnel involved are instructed to report any abnormal vehicle performance.

17.1.10.3. Blanket Approval List
We do not anticipate any allowable unscheduled maintenance on items, other than those listed in MSAPC Advisory Circular No. 4A 1.

17.1.11. Warranty Statement
Our statement with regard to the Emission Control System Warranty complies with the Paragraphs contained in the provisions of CCR Title 13, Chapter 1, Article 6.

17.1.12. Environmental Performance Label
This test group will adopt the revised EPA/DoT Fuel Economy and Environment label commencing with Monroney labels produced for 2017MY vehicles. Refer to label example in Section 15.

17.1.11. Warranty Statement
Our statement with regard to the Emission Control System Warranty complies with the paragraphs contained in the provisions of CCR Title 13, Division 3, Chapter 1, Article 6 which contains sections 2035 to 2046.

17.1.12. Environmental Performance Label

This test group will adopt the revised EPA/DoT Fuel Economy and Environment label commencing with Monroney labels produced for 2017MY vehicles. Refer to label example in Section 15.

17.2. Fill Pipe Specification

The nomenclature and symbols used below are the same as those defined in "Specifications for fill pipes and openings of 2015 and subsequent motor vehicle fuel tanks" amended March 22, 2012 (Ref: ISO13331-1995(E) as adopted Jun 1995)

General Specifications	ARB Specification	Manufacturer Specification*
(1) Angle α in degrees	-10° ≤α≤ 20°	2°
(2) Spill prevention in degrees (angle between centerline of test spout in its resting position and the horizontal plane)	30° (min)	68.8°
(3) Test nozzle penetration of Restrictor	22.5 mm (min)	30.85
(4) Angle β in degrees	none	2°

Fill Pipe Specifications	ARB Specification	Manufacturer Specification*
(1) Fill pipe surface in TIR	0.25 mm	0.1
(2) Fill pipe face outside diameter	57.5 mm (max)	54mm
	52.0 mm (min)	53mm
(3) Internal locking lip in degrees of the inside circumference	100° (min)	153°
(a) degrees extending each side of reference plane	35° (min)	LS** 95°, RS*** 85°
(4) Height of lip measured from fill pipe inside wall; or	2.5 mm (min)	3
height of lip measured from fill pipe outside wall for outside diameters between 52 and 57.5mm	8.5 mm (min)	
(5) Depth of lip (D)	4 ≤ D ≤ 10 mm	6.85

Offset A	None	none
Offset B	None	none
(6) Fill pipe face clearance (Axial)	2.5 mm (min)	2.7
(7) Fill pipe face clearance (Radial)	40mm (min)	46
(8) Fill pipe face inside diameter	49.8mm (max)	35.5
(9) Bench Fill Pipe Leak Test	2.5L/min (Max) at 500Pa Vacuum	Ave 0.7l/min across 9 samples
(10) Capped or capless		capless
(11) seal - mechanical or liquid		liquid
(12) Disruption in the fill pipe face		None
(13) ORVR Design (I/NI/NIRCO/NO)****		I - Integrated
(14) Type - Threaded, Bayonet or Capless		Capless
(15) Usage of Design (evap family or model)		Vanquish
(16) Total vehicle model year sales		see Section 16

* Dimension should include adverse tolerance condition

** LS = Left side of reference plane

*** RS = Right side of reference plane

**** ORVR Design: Integrated (I), Non-integrated (NI), Non-integrated Refuelling Canister only (NIRCO), Non ORVR (NO)

17.3. Projected Sales

Confidential information – refer to section 16, page 3

17.4. Evaporative Emission Deterioration

17.4.1. Evaporative Family Identification VASXR0160T3A

17.4.2. Parameters of Evaporative Family Refer to Section 3.1

17.4.3 Fuel Tank Temperature and Pressure Profile and Ambient Conditions

The temperature correction was conducted in accordance with the Federal Evaporative Emission Standards and Test Procedures after the following equation:

$$Ti\ ,profile = Ti - To$$

Ti is the series of observed liquid fuel temperature during the drive (°F) where i is the incremental measurement in time.

To is the liquid fuel temperature observed at the start of the specified driving schedule (°F).

Ti ,profile is the series of temperatures that comprise the relative temperature profile for table of Ti refer to Enclosure 1 of Section 12.

17.5. Supplemental Data Sheets

17.5.1. Common

Manufacturer	Aston Martin Lagonda Ltd
Vehicle Model(s)	Vanquish Vanquish Volante
Test Group	VASXV05.2AMV
Evaporative Family	VASXR0160T3A
Engine Type	V12 Gasoline
Liters (CID)	5.2 (312 in.³).
Drive System	Front engine, rear wheel drive

17.5.2. Abbreviations

17.5.2.1. Ignition System

ECM	Engine Control Module
EI	Electronic Ignition
KS	Knock Sensor

17.5.2.2. Exhaust Emission Control System

2WU-TWC/2TWC	One Primary catalyst and one Secondary catalyst in series per bank
2WR-HO2S/2HO2S	One Heated Oxygen Sensor and one Monitor Sensor on each primary Three Way Catalyst.

17.5.2.3. Special Features

OBD II, 2TC, 2CAC, AIRE	On-Board Diagnostics II, 2 turbochargers, 2 charge air coolers, secondary air

17.5.2.4. Fuel System

SFI	Sequential Fuel Injection

17.5.3. 2027 Air Resources Board Supplemental Data Sheet Passenger Cars, Light Duty Truck and Medium Duty Vehicles

Manufacturer	Aston Martin	**Test Group:**	VASXV05.2AMV	**Evaporative Family**	VASXR0160T3A

All Eng. Codes in test group CA X 49S ___ 50S X AB965 ___ ORVR Yes X o ___

PC X LDT1 ___ MDV1 ___ MDV2 ___ MDV3 ___ MDV4 ___ MDV5 ___

Single Cert. Std. for Multi-Class Test Group: N/A

Fuel Type(s): Dedicated X Flex-Fuel ___ Dual Fuel ___ Bi-Fuel ___ Gasoline X Diesel ___
CNG ___ LNG ___ LPG ___ M85 ___ Other (Specify ___)

Emission Test Fuel (s): Indo ___ CBG ___ G ___ LPG ___ M85 ___ Other (Specify) EPA T3 E10 Premium
Diesel: 13 CCR 2282 ___ 40 CFR 86.113-90 ___ 40 CFR 86.113-94 ___

Evaporative Test Procedure: California ___ Federal X

Service Accum: Std. AMA ___ Mod AMA ___ Mfr ADP X Other (Specify ___)

NMOG Test Procedure: N/A ___ Std X Equiv ___ **R/L Test Proc** SHED ___ Pt Source X

Engine Configuration: V12 Displacement 5.2 Liters 312 Cubic Inches

Valves per Cylinder: 4 Rated HP 825 @ 6500 RPM **Vanquish**
Rated HP ___ @ ___ RPM
Rated HP ___ @ ___ RPM
Rated HP ___ @ ___ RPM

Engine: Front X Mid ___ Rear ___ **Drive:** D ___ RWD X 4WD-FT ___ 4WD-PT ___

Exhaust ECS: 2WU-TWC/2TWC/2WR-HO2S/2HO2S/2TC/2CAC/SFI/AIRE

Engine Code	Vehicle Model	Trans Type	ETW (lbs.)	ECM CAL ID	TCM CAL ID	Catalytic Converter Part #'s
AE34/	Vanquish	A8	4500	3A260B#/D#	HY53-7J105-A#	LH: #Y53-5E215-A# RH: #Y53-5E214-A#
AE34/	Vanquish Volante	A8	4750	3A260B#/D#	HY53-7J105-A#	LH: #Y53-5E215-A# RH: #Y53-5E214-A#
.	.	.	.	.		.
.	.	.	.	.		.

17.5.4. 2027 Model Year Air Resources Board Certification Review Sheet Passenger Cars, Light Duty Truck and Medium Duty Vehicles

Manufacturer: Aston Martin **Test Group:** VASXV05.2AMV **Family:** VASXR0160T3A

All Eng. Codes in Test Group: CA X 49S ___ 50S X AB965 ___ **ORVR:** Yes X o ___

Exhaust Std: LEV ___ ULEV X V ___ E ___ US EPA T3 Equiv B125

Evap Std.: 50K ___ Useful Life with R/L X **In-use Exh. Std:** Full in-use X Alt in-use ___

PC X LDT1 ___ MDV1 ___ MDV2 ___ MDV3 ___ MDV4 ___ MDV5 ___

Single Cert. Std. for Multi-Class Test: N/A

Fuel Type(s): Dedicated ___ Flex-Fuel ___ Dual Fuel ___ Bi-Fuel ___ Gasoline X Diesel ___

CNG ___ LNG ___ LPG ___ M85 ___ Other (Specify ___)

Emission Test Fuel (s): Indo ___ CBG ___ G ___ LPG ___ M85 ___ Other (Specify EPA T3 E10 Premium)

Diesel: 13 CCR 2282 ___ 40 CFR 86.113-90 ___ 40 CFR 86.113-94 ___

Evaporative Test Procedure: California ___ Federal X

Service Accum: Std. AMA ___ Mod AMA ___ Mfr ADP X Other (Specify ___)

NMOG Test Procedure: N/A ___ Std X Equiv ___ **R/L Test Proc** SHED ___ Pt Source X

Engine Configuration: V12 Displacement 5.2 Liters 312 Cubic Inches

Valves per Cylinder: 4 Rated HP 825 @ 6500 RPM **Vanquish EDV**

___ @ ___ RPM

Engine: Front X Mid ___ Rear ___ **Drive:** D ___ RWD X 4WD-FT ___ 4WD-PT ___

Exhaust ECS: 2WU-TWC/2TWC/2WR-HO2S/2HO2S/2TC/2CAC/SFI/AIRE

		Chapt			Chapter
1	Authorized Representative	Sec 1	22	Gen. Std, Increase in Emissions	
2	Fuel Specifications	Sec		Safety, Meets all Requirements	Sec 14 + 17
3	Test Equipment	Sec	23	Driveability Statement	Sec 17
4	Test Procedure	Sec	24	Adjustable Parameters	None
5	Mileage Accumulation Route	Dyno	25	Tamper Resistance Method(s)	N/A.
6	Emiss.Warranty Statement	Sec	26	Fill Pipe Specifications	Sec 17
7	Maint: Cert/Req'd/Recm'd	Sec	27	High Altitude Compliance	Sec 17
8	Emiss.Label/Vac. Hose Diag.	Sec	28	OBD Sys.incl.Marked Revisions	Sec 9
9	Evap. Control System	Sec 3	29	I&M Test Procedure & Data	Sec 17
10	Engine Parameters	Sec 7	30	50 Degree F Compliance	Sec 17
11	Fuel System	Sec 3	31	Manufacturer's RAF	N/A.
12	Ignition System	N/A	32	Phase In Sched: ORVR Cert Std	100%
13	Exhaust Control Systems	N/A		Full Range Misfire Monitoring	Sec 9
14	Projected Sales (LDT/MDV Split)	Sec		LEV CAT Monitoring - 1.5 x Std	Sec 9
15	Vehicle Description	Sec 6		0.020“ Orifice-Based Leak Chk	Sec 9
16	Evap. Bench Test Procedure	Sec		MDV VEC Calculation	N/A.
17	R/L Temp & Press Profiles	Sec	33	NMOG Fleet Average Calculation	Sec 16
18	EDV Selection	Sec 2	34	AB965 Credits/Withdrawals	N/A.
19	Prod.Veh.same as Test Veh.St.	Sec	35	EPA Certificate	Not yet
20	Emiss. Label Durability St.	Sec	36	Equiv. NMOG Proc--ARB Approval	Yes

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Test Vehicle Information	Durability Data	Emission Data Vehicle	Evap Emission Data	FEDV
C/O or C/A	C/O			-----
MY & ID	N/A	2025, 370TT7334	2022, 564TT5477	2025 370TT7334 2026 382TT7334
Vehicle Log Page(s)				-----
Zero Mile Book Page(s)	-----	-----	-----	-----
Maint. Logs & Engr. Eval.	N/A	N/A	N/A	-----

17.5.4. 2027 Model Year Certification Review Sheet Passenger Cars, Light Duty Truck and Medium Duty Vehicles

Manufacturer: Aston Martin Lagonda Ltd.
Test Group: VASXV05.2AMV
Evaporative Family: VASXR0160T3A

Emission Data Vehicle ID	Engine Code & Displ.	Test Location	Trans	ETW (lbs)	DPA (hp)	MPG	
						City	Hwy
370TT7334	AE34/ 5204cc	Manufacturer	S8	4500	N/A	15.8	28.2

PROJECTED EMISSIONS (1) (2)

(grams/mile, except, grams/test for D+HS, grams/gallon for ORVR)

Test Fuel: EPA T3 E10 Premium **Test Fuel Evap:** EPA T3 E10 Premium		FTP NMOG+ NOx	CO	NOx	HCHO (mg/mi)	20°F CO	HFET NMOG+ NOx	CO_2 City/Hwy	3day D+HS	2day D+HS	R/L	Re-Fuelling
Mileage	50k					1.45		546/307	-	-	-	-
	150k	0.0427	1.23	0.024	-		0.0040		0.247	N/A	0.001	0.112

The Emissions Data vehicle(s) above comply with standards as follows:											
at 50k of					10						
at 150k of	0.125	2.1	-	11		0.125		0.30	0.30	0.05	0.20
and include additive DFs:											
at 150k of	0.000	0.10	0.000	-	N/A	0.000					
Evaporative 150k DFs of								0.0021	0.00	0.00	0.006

SFTP TEST RESULTS

(grams/mile)

Mileage		Measurable		Emissions Cert Level		Emissions Standard
150k		US06 -NMOG+NOx		0.097		0.15
150k		US06 - CO		0.56		9.6
150k		US06 - PM		0.0002		0.006
150k		SC03 - NMOG+NOx		0.034		0.125
150k		SC03 - CO		0.93		2.1
4k		CO_2 - US06		456.41		
4k		CO_2 - SC03		679.25		

* Composite calculation based on 0.35FTP+0.28US06+0.37SC03

	50k	CO	NMOG+NOx	HCHO	
ULEV 50° F emissions (w/RAF but w/o DFs)		1.16	0.078	-	Exempted
ULEV 50° F standards		2.10	0.250	0.0016	Exempted

The

Remarks: _____

_____

Application Processed by: _____ Date _____ Reviewed By: _____ Date _____

17.6. Vehicle Weights

17.6.1 Curb Weight 4211 lbs - Coupe EDV & FEDV
4421 lbs - Convertible - FEDV

17.6.2 Equivalent test weight 4500 lbs at LVW - Coupe
4750 lbs at LVW - Convertible

17.7. Exhaust and Evaporative Standards to which this test group is certified

Applicable Standards: 50 state - EPA Interim T4 Light Duty vehicle
CARB - LEV4 ULEV125 Passenger Car
CARB LEV4 Evap

	4k	50k	150k	
FTP NMOG+NOx			0.125	g/mi.
CO			2.1	g/mi.
FTP PM			3	mg/mi.
HCHO			11	mg/mi.
HFET NMOG+NOx			0.125	g/mi.
Cold CO		10		g/mi.
Cold NMHC Fleet			0.3	g/mi.
Evap 3d	-		0.3	g/test
Supplem. 2d	-		0.3	g/test
Running Loss	-		0.05	g/mi.
ORVR	-		0.2	g/gal
50F - NMOG+NOx		0.25		g/mi.
50F - CO		2.1		g/mi.
50F - HCHO		16		mg/mi.
US06 NMOG+NOx		-	0.15	g/mi.
US06 CO		-	9.6	g/mi.
US06 PM			6	mg/mi
SC03 NMOG+NOx		-	0.125	g/mi.
SC03 CO		-	2.1	g/mi.
				g/mi.

17.8. California Assembly Line Test Procedure – NMOG to NMHC Ratio and HCHO to NMHC Ratio

The following were determined during the certification process:

NMHC:NMOG 1:1.10
NMHC:HCHO 1:0.01