## Application for Emissions Certification

| | |
|---|---|
| Model Year: | 2027 |
| Test Group: | VASXJ04.0AEX |
| Evaporative Families: | VASXR0160T3A & VASXR0160T3B |
| Durability Group: | VASXGPGNNE23 |
| Certification Summary Information Report #'s (CSI) | VASXJ04.0AEX-TASXR0160T3A<br>VASXJ04.0AEX-TASXR0160T3B |
| Durability Group Description: | Four Stroke, Otto Cycle<br>Sequential Gasoline Fuel Injection,<br>Pressure Charged Induction,<br>Catalyst Code: E23<br>Ceramic Monolith,<br>Pd/Rh Catalyst, |
| Test Group Description: | 4.0 litre, 2WU-TWC/2TWC/2WR-H02S/2HO2S/2TC/2CAC/DFI |
| Applicable Standards: | 50 state - EPA T3 Bin70, CARB LEV4 ULEV 70 |
| Car Lines Covered: | 572 - DB12 V8<br>547 - DB12 S<br>614 - Vantage<br>840 - DBX |

| Vehicles Tested: | EDV | Config | Test | VERIFY Test Number |
|---|---|---|---|---|
| Exhaust | 5723PT5601 | 00 | FTP | RASX10082324 |
| | | | HWFET | RASX10082327 |
| | | | Cold CO | RASX10082335 |
| | | | SC03 | RASX10082336 |
| | | | US06 - 2 bag | RASX10082328 |
| | | | 50F | RASX10082329 |

EPA Response Requested By: June 19, 2026

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

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# 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 West 42nd Street, 22nd Floor
New York, NY10036
USA

Fax-No.: (949) 379 3140

1.1.2. Generic email Address

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

amlegiscert@astonmartin.com

1.1.3. Persons situated in the manufacturers home office and authorized to communicate with EPA and CARB

| Name | First Name | Area of responsibility | Phone Number | E-Mail |
|---|---|---|---|---|
| Naughton | Simon | Head of Legislation & Certification | 00 44 1926 644090 | simon.naughton@astonmartin.com |
| Gillibrand | Karl | Manager Powertrain Certification | 00 44 1926 644159 | karl.gillibrand@astonmartin.com |
| Haggett | Martin | Powertrain Certification.Expert | 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: amlegiscert@astonmartin.com

**1.3. Primary Certification Contact:**

Primary Certification Contact See Section 1.1.1.

## 2. Durability Group Description

| | | |
|---|---|---|
| 2.1. | Durability Group Name | VASXGPGNNE23 |
| 2.2. | Combustion Cycle | Four stroke, Otto cycle, piston |
| 2.3. | Engine Type | V8 Turbocharged |
| 2.4. | Fuel | Gasoline |
| 2.5. | Basic Fuel Metering System | Direct fuel injection |
| 2.6. | Catalyst Construction | Ceramic Primary and secondary catalysts |
| 2.7. | Precious Metals in Catalyst | Palladium and Rhodium 3-Way |
| 2.8. | Range of Catalyst Grouping Statistic | 4.3g/litre (determined from grouping statistic equation). |

# 3. Evaporative/Refueling Family Description

| | | |
|---|---|---|
| **3.1.** | **Evaporative/Refueling Family** | VASXR0160T3A & VASXR0160T3B |
| **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

Refuelling family reviewed by EPA / NHTSA

| Date of EPA/NHTSA Submittal | Date of EPA/NHTSA Approval | 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 |
|---|---|---|
| 05/19/2026 | VASXR0160T3A & VASXR0160T3B | DB12/DBX/Vantage |

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 DB12 that require a new or significantly revised 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 2023-01 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: | Not applicable - use of EPA assigned DFs from 2022MY onward |
| 4.1.2. | Durability Program for Evaporative/Refueling Emissions: | Not applicable - use of EPA assigned DFs from 2022MY onward |

## 4.2. Deterioration Factors

| | | |
|---|---|---|
| 4.2.1. | Exhaust Emissions: | EPA assigned additive deterioration factors.<br><br>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: | EPA assigned deterioration factors.<br><br>- as shown in CD-2023-01. |

# 5. Test Group Description

| | | |
|---|---|---|
| **5.1.** | **Test Group Name** | VASXJ04.0AEX |
| **5.2.** | **Certification Summary Information Report # (CSI)** | VASXJ04.0AEX-TASXR0160T3A<br>VASXJ04.0AEX-TASXR0160T3B |
| **5.3.** | **Engine Displacement** | 3982cm³ (243 in.³) |
| **5.4.** | **Arrangement and number of cylinders:** | |
| 5.4.1. | Arrangement of cylinders | V - Configuration |
| 5.4.2. | Number of cylinders | 8 |
| **5.5.** | **Emission Standards** | |
| 5.5.1. | Vehicle class covered | EPA - LDV & LDT4<br>California and green states - PC & LDT2 |
| 5.5.2. | Emission Standards class | EPA assigned deterioration factors. |
| 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/FEDV | Config No. | Engine Displ ($cm^3$) | Emission Control System | Engine Code | Trans | ETW | Axle Ratio | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5723PT5601 | 00 | 3982 | 2WU-TWC/2TWC/2WR-H02S/2HO2S/2TC/2CAC/DFI | 177850 | A8 | 4500 | 3.08 | EDV – FTP, HWFET, Cold CO, US06, SC03 and 50F<br>FEDV -FTP & HWFET (Tier 2 fuel) |
| 2 | 564TT5477 | 00 | 3982 | 2WU-TWC/2TWC/2WR-H02S/2HO2S/2TC/2CAC/DFI | 177950 | A8 | 4500 | 2.7 | EDV - ORVR and 3DD Evap |
| 3 | 8001PT8342 | 00 | 3982 | 2WU-TWC/2TWC/2WR-H02S/2HO2S/2TC/2CAC/DFI | 177950 | A9 | 5500 | 3.06 | EDV - ORVR, 2DD and 3DD Evap |
| 4 | 8841PT8473 | 00 | 3982 | 2WU-TWC/2TWC/2WR-H02S/2HO2S/2TC/2CAC/DFI | 177950 | A9 | 5500 | 3.27 | FEDV - FTP & HWFET (Tier 2 fuel) |
| 5 | 6122PT6433 | 00 | 3982 | 2WU-TWC/2TWC/2WR-H02S/2HO2S/2TC/2CAC/DFI | 177850 | A8 | 4250 | 3.08 | FEDV - FTP & HWFET (Tier 2 fuel) |
| 6 | 840TT8650 | 00 | 3982 | 2WU-TWC/2TWC/2WR-H02S/2HO2S/2TC/2CAC/DFI | 177950 | A9 | 5500 | 3.27 | FEDV - FTP & HWFET (Tier 2 fuel) |
| 7 | 547TT5632 | 00 | 3982 | 2WU-TWC/2TWC/2WR-H02S/2HO2S/2TC/2CAC/DFI | 177850 | A8 | 4500 | 3.08 | FEDV - FTP & HWFET (Tier 2 fuel) |

6.2. EDV Selection

5723PT5601

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. |
|---|---|---|
| 5723PT5601 | FTP | RASX10082324 |
| | HWFET | RASX10082327 |
| | COLD CO (20F) | RASX10082335 |
| | SC03 | RASX10082336 |
| | US06 - 2 bag test | RASX10082328 |
| | 50F | RASX10082329 |
| 564TT5477 | 2 Day Evap | statement |
| | 3 Day Evap | NASX10082352 |
| | ORVR | NASX10071584 |
| 8001PT8342 | 2 Day Evap | MASX10065539 |
| | 3 Day Evap | MASX10065541 |
| | ORVR | MASX10065519 |
| Common | Bleed Emissions | MASX10071437 |

## 7. Certification Summary Information Reports

For requested information refer to the attached CSI Sheets processed by EVCIS:

| Enclosure No. | CSI Report # | Date |
|---|---|---|
| 1 | VASXJ04.0AEX-TASXR0160T3A<br>VASXJ04.0AEX-TASXR0160T3B | 05/19/2026 |

**CSI reports are appended following this page:**

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Manufacturer** | Aston Martin Lagonda | **Manufacturer Code** | ASX |
| **Test Group** | VASXJ04.0AEX | **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** | 05/06/2026 08:58:45 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 | Spark Ignition Direct 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** | VASXGPGNNE23 | **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** | J1979-2 OBD on UDS | | |
| **Mfr Test Group Comments** | -- | | |
| **Mfr Exhaust / Evap Standards Comments** | -- | | |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **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 | 572 - DB12 V8 | Federal | 2-Wheel Drive, Rear | Automatic | 8 | Yes |
| Aston Martin Lagonda | 1 - Aston Martin Lagonda Ltd | 572 - DB12 V8 | California + CAA Section 177 states | 2-Wheel Drive, Rear | Automatic | 8 | Yes |
| Aston Martin Lagonda | 1 - Aston Martin Lagonda Ltd | 614 - Vantage | California + CAA Section 177 states | 2-Wheel Drive, Rear | Automatic | 8 | Yes |
| Aston Martin Lagonda | 1 - Aston Martin Lagonda Ltd | 614 - Vantage | Federal | 2-Wheel Drive, Rear | Automatic | 8 | Yes |
| Aston Martin Lagonda | 1 - Aston Martin Lagonda Ltd | 547 - DB12 S | Federal | 2-Wheel Drive, Rear | Automatic | 8 | Yes |
| Aston Martin Lagonda | 1 - Aston Martin Lagonda Ltd | 547 - DB12 S | California + CAA Section 177 states | 2-Wheel Drive, Rear | Automatic | 8 | Yes |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3A |

## 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** | 8 | **Mechanically Variable Compression Ratio Indicator** | N |

## After Treatment Device(s) (ATD)

| ATD Number | ATD Type | ATD Precious Metal | Substrate Material | Substrate Construction |
|---|---|---|---|---|
| 1 | Three-way catalyst | Palladium + Rhodium | Ceramic | Monolith |
| 2 | Three-way catalyst | Palladium + Rhodium | Ceramic | Monolith |
| 3 | Three-way catalyst | Palladium + Rhodium | Ceramic | Monolith |
| 4 | Three-way catalyst | Palladium + Rhodium | Ceramic | Monolith |

| | |
|---|---|
| **Mfr After Treatment Device (ATD) Comments** | Warm up primary element per bank plus an underfloor mounted secondary element per bank. |
| **Direct Ozone Reduction (DOR) Device** | Not Equipped |
| **Mfr Emission Control Device Comments** | -- |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3A |

## Engine Configuration Number 1

| | | | |
|---|---|---|---|
| **Engine Displacement (liters)** | 4.0 | **Engine Rated Horsepower** | 665 |
| **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** | No | | |
| **Air Injection Type** | Not Applicable | **Air Injection Type if 'Other'** | -- |
| **Mfr Engine Configuration Comments** | Vantage Power Spec | | |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3A |

## Engine Configuration Number 2

| | | | |
|---|---|---|---|
| **Engine Displacement (liters)** | 4.0 | **Engine Rated Horsepower** | 680 |
| **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** | No | | |
| **Air Injection Type** | -- | **Air Injection Type if 'Other'** | -- |
| **Mfr Engine Configuration Comments** | Vantage S and DB12 power spec | | |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3A |

## Engine Configuration Number 3

| | | | |
|---|---|---|---|
| **Engine Displacement (liters)** | 4.0 | **Engine Rated Horsepower** | 700 |
| **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** | No | | |
| **Air Injection Type** | -- | **Air Injection Type if 'Other'** | -- |
| **Mfr Engine Configuration Comments** | DB12 S power spec | | |

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3A |

## Engine Configuration Number 4

| | | | |
|---|---|---|---|
| **Engine Displacement (liters)** | 4.0 | **Engine Rated Horsepower** | 727 |
| **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** | Individual cylinder de-activation hardware is installed, but not used | | |
| **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** | No | | |
| **Air Injection Type** | -- | **Air Injection Type if 'Other'** | -- |
| **Mfr Engine Configuration Comments** | DBX S and GT power Spec | | |

## 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 | RASX10082324 | RASX10082328 | RASX10082336 | RASX10082335 | RASX10082327 | 16.1 | 228.2 | 31.0 | 286.1 | -- |

## SFTP LEV-III Official Test Numbers

| Test Group Fuel | FTP | US06 | SC03 |
|---|---|---|---|
| Gasoline | RASX10082324 | RASX10082328 | RASX10082336 |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **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 |

# Certification Summary Information Report

| Test Group | VASXJ04.0AEX | 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 |
|---|---|---|---|---|---|---|---|---|
| Fed | 150,000 miles | Federal Tier 3 Evap | HC-TOTAL-EQUIV | 0.2450 | 0.0021 | 0.247 | 0.275 | Pass |
| CA | 150,000 miles | California LEV-IV Zero Evap (Option 2) | HC-TOTAL-EQUIV | 0.2450 | 0.0021 | 0.247 | 0.275 | Pass |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **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 | 0.006 | 0.1 | 0.2 | Pass |
| CA | 150,000 miles | California LEV-IV Zero Evap (Option 2) | HC-TOTAL-EQUIV | 0.11 | 0.006 | 0.1 | 0.2 | Pass |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **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** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3A |

## Emission Data Vehicle Information

| | | | |
|---|---|---|---|
| **Vehicle ID / Configuration** | 5723PT5601 / 0 | **Manufacturer Vehicle Configuration Number** | 0 |
| **Original Test Group Name** | RASXV04.0AES | **Original Evaporative/Refueling Family** | RASXR0160T3A |
| **Original Test Vehicle Model Year** | 2024 | | |

## Vehicle Model

| | | | |
|---|---|---|---|
| **Represented Test Vehicle Make** | Aston Martin | **Represented Test Vehicle Model** | DB12 V8 |

## Leak Family Details

| | | | |
|---|---|---|---|
| **Leak Family Identifier** | 001 | **Leak Family Name** | RASXR0160T3A-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** | 177850 | **Rated Horsepower** | 680 |
| **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)** | 4024 | **Equivalent Test Weight (pounds)** | 4500 |
| **GVWR (lbs)** | -- | **N/V Ratio** | 24.8 |
| **Axle Ratio** | 3.08 | | |
| **Transmission Type** | Automatic | **# of Transmission Gears** | 8 |
| **Transmission Lockup** | Yes | **Creeper Gear** | No |

# Certification Summary Information Report

| Test Group | VASXJ04.0AEX | 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** | 53.24 | 0.2228 | 0.0221 | 5.67 | 0.0083 | 0.0221 | 16 |
| **Cold CO** | 58.56 | 0.2451 | 0.0243 | 7.89 | 0.1957 | 0.0196 | N/A |
| **US06** | 53.24 | 0.2228 | 0.0221 | 5.67 | 0.0083 | 0.0221 | N/A |

**Emission Control Device Comments** --

**Manufacturer Test Vehicle Comments** 2024MY DB12 V8 Coupe 8 speed auto

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3A |

| | | | |
|---|---|---|---|
| **Test #** | **RASX10082324** | **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** | 07/26/2023 | **Fuel** | Gasoline |
| **Fuel Batch ID** | 43987 | **Fuel Calibration Number** | 8394 |
| **Vehicle Class** | LDV/Passenger Car | **DF Type** | EPA Assigned |
| **Verify Test Lab ID** | IDIADA Automotive Technology SA | | |
| **E10 Evaporative Test Measurement Method** | -- | | |
| **Test Start Odometer Reading** | 4267 | **Odometer Units** | M |
| **4WD Test Dyno** | No | **Diesel Adjustment Factor Usage** | -- |
| **State of Charge Delta** | -- | | |
| **Drive Cycle Speed Tolerance Criteria** | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec) | **Road Speed Fan Usage** | Yes |

## Test Results

| Test Result Name | Unrounded Test Result | Verify Calculated FE Equivalent Value (miles per gallon) |
|---|---|---|
| **CO2 BAG 1 (Bag 1 Carbon Dioxide)** | 527.833 | -- |
| **FE BAG 1 (Bag 1 Fuel Economy)** | 16.4993 | 16.4993 |
| **CO2 BAG 2 (Bag 2 Carbon Dioxide)** | 565.283 | -- |
| **FE BAG 2 (Bag 2 Fuel Economy)** | 15.4886 | 15.4886 |
| **CO2 BAG 3 (Bag 3 Carbon Dioxide)** | 418.11 | -- |
| **FE BAG 3 (Bag 3 Fuel Economy)** | 20.9211 | 20.9211 |
| **METHANE (CH4 - Methane)** | 0.008 | -- |
| **CO (Carbon Monoxide)** | 0.503 | -- |
| **DT-ASCR (Drive Trace Absolute Speed Change Rating)** | 1.34 | -- |
| **DT-EER (Drive Trace Energy Economy Rating)** | 0.11 | -- |
| **DT-IWRR (Drive Trace Inertia Work Ratio Rating)** | 1.46 | -- |
| **HCHO (Formaldehyde)** | 0.0009 | -- |
| **MFR FE (Manufacturer Fuel Economy)** | 16.908 | 16.908 |
| **NOX (Nitrogen Oxide)** | 0.009 | -- |
| **N2O (Nitrous Oxide)** | 0.003 | -- |
| **HC-NM (Non-methane Hydrocarbon)** | 0.018 | -- |
| **NMOG (Non-methane organic gases)** | 0.0195 | -- |
| **PM (Particulate Matter)** | 0.001 | -- |
| **HC-TOTAL (Total Hydrocarbon)** | 0.0248 | -- |

# Certification Summary Information Report

| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3A |
|---|---|---|---|

| Test Result Name | Unrounded Test Result | Verify Calculated CREE/OPT-CREE |
|---|---|---|
| **Carbon-Related Exhaust Emissions** | 517.14 | 999 |

| Test Result Name | Unrounded Test Result | Verify Calculated CO2 |
|---|---|---|
| **Carbon dioxide** | 517.14 | -- |

**Manufacturer Test Comments** 2024MY DB12 V8 EDV

# Certification Summary Information Report

**Test Group** VASXJ04.0AEX **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 70 | CO | 0.50 | -- | -- | -- | 0.24 | -- | 0.7 | 1.7 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | CO-COMP | 0.58 | -- | -- | -- | 0 | -- | 0.6 | 4.2 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | CREE | 999 | -- | -- | -- | 0.000 | -- | 999 | -- | -- |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | HCHO | 0.0009 | -- | -- | -- | 0.0003 | -- | 0.001 | 0.004 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | METHANE | 0.008 | -- | -- | -- | 0.000 | -- | 0.01 | 0.03 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | N2O | 0.003 | -- | -- | -- | 0.007 | -- | 0.01 | 0.01 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NMOG | 0.0195 | 1 | 1.10 | -- | 0.0098 | -- | 0.029 | 999.999 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NMOG+NOX | 0.0285 | -- | 1.10 | -- | -- | -- | 0.045 | 0.070 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NMOG+NOX-COMP | 0.0418 | -- | 1.10 | -- | 0 | -- | 0.042 | 0.050 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NOX | 0.0090 | -- | -- | -- | 0.007 | -- | 0.016 | 999.999 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | PM | 0.0010 | -- | -- | -- | 0 | -- | 0.001 | 0.003 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | CO | 0.50 | -- | -- | -- | 0.24 | -- | 0.7 | 1.7 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | CREE | 999 | -- | -- | -- | 0.000 | -- | 999 | -- | -- |
| CA | 150,000 miles | California LEV-IV ULEV70 | HCHO | 0.0009 | -- | -- | -- | 0.0003 | -- | 0.001 | 0.004 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | METHANE | 0.008 | -- | -- | -- | 0.000 | -- | 0.01 | 0.03 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | N2O | 0.003 | -- | -- | -- | 0.007 | -- | 0.01 | 0.01 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | NMOG | 0.0195 | 1 | 1.10 | -- | 0.0098 | -- | 0.029 | 999.999 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | NMOG+NOX | 0.0285 | -- | 1.10 | -- | -- | -- | 0.045 | 0.070 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | NOX | 0.0090 | -- | -- | -- | 0.007 | -- | 0.016 | 999.999 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | PM | 0.0010 | -- | -- | -- | 0 | -- | 0.001 | 0.003 | Pass |

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

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3A |

| | | | |
|---|---|---|---|
| **Test #** | **RASX10082329** | **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** | 08/16/2023 | **Fuel** | Gasoline |
| **Fuel Batch ID** | 59318 | **Fuel Calibration Number** | 3658 |
| **Vehicle Class** | LDV/Passenger Car | **DF Type** | EPA Assigned |
| **Verify Test Lab ID** | Mahle Powertrain | | |
| **E10 Evaporative Test Measurement Method** | -- | | |
| **Test Start Odometer Reading** | 4493 | **Odometer Units** | M |
| **4WD Test Dyno** | No | **Diesel Adjustment Factor Usage** | -- |
| **State of Charge Delta** | -- | | |
| **Drive Cycle Speed Tolerance Criteria** | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec) | **Road Speed Fan Usage** | Yes |

## Test Results

| Test Result Name | Unrounded Test Result | Verify Calculated FE Equivalent Value (miles per gallon) |
|---|---|---|
| **CO (Carbon Monoxide)** | 0.62 | -- |
| **DT-ASCR (Drive Trace Absolute Speed Change Rating)** | -2.7 | -- |
| **DT-EER (Drive Trace Energy Economy Rating)** | -0.189 | -- |
| **DT-IWRR (Drive Trace Inertia Work Ratio Rating)** | -3.79 | -- |
| **HCHO (Formaldehyde)** | 0.0002 | -- |
| **MFR FE (Manufacturer Fuel Economy)** | 16.4971 | 16.4971 |
| **NOX (Nitrogen Oxide)** | 0.014 | -- |
| **NMOG (Non-methane organic gases)** | 0.0321 | -- |
| **PM (Particulate Matter)** | 0.005 | -- |
| **HC-TOTAL (Total Hydrocarbon)** | 0.0402 | -- |

| Test Result Name | Unrounded Test Result | Verify Calculated CO2 |
|---|---|---|
| **Carbon dioxide** | 499.31 | -- |

**Manufacturer Test Comments** 2024MY DB12 V8 EDV

# Certification Summary Information Report

**Test Group** VASXJ04.0AEX **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 ULEV70 | CO | 0.62 | -- | -- | -- | 0 | -- | 0.6 | 1.7 | Pass |
| CA | 50,000 miles | California LEV-IV ULEV70 | HCHO | 0.0002 | -- | -- | -- | 0 | -- | 0.000 | 0.016 | Pass |
| CA | 50,000 miles | California LEV-IV ULEV70 | NMOG | 0.0321 | -- | -- | -- | 0 | -- | 0.032 | 999.999 | Pass |
| CA | 50,000 miles | California LEV-IV ULEV70 | NMOG+NOX | 0.0461 | 1 | 1.10 | -- | -- | -- | 0.05 | 0.14 | Pass |
| CA | 50,000 miles | California LEV-IV ULEV70 | NOX | 0.0140 | -- | -- | -- | 0 | -- | 0.014 | 999.999 | Pass |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3A |

| | | | |
|---|---|---|---|
| **Test #** | **RASX10082335** | **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** | 08/18/2023 | **Fuel** | Gasoline |
| **Fuel Batch ID** | 59318 | **Fuel Calibration Number** | 3658 |
| **Vehicle Class** | LDV/Passenger Car | **DF Type** | EPA Assigned |
| **Verify Test Lab ID** | Mahle Powertrain | | |
| **E10 Evaporative Test Measurement Method** | -- | | |
| **Test Start Odometer Reading** | 4545 | **Odometer Units** | M |
| **4WD Test Dyno** | No | **Diesel Adjustment Factor Usage** | -- |
| **State of Charge Delta** | -- | | |
| **Drive Cycle Speed Tolerance Criteria** | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec) | **Road Speed Fan Usage** | Yes |

## Test Results

| Test Result Name | Unrounded Test Result | Verify Calculated FE Equivalent Value (miles per gallon) |
|---|---|---|
| **CO2 BAG 1 (Bag 1 Carbon Dioxide)** | 637.23 | -- |
| **FE BAG 1 (Bag 1 Fuel Economy)** | 13.1343 | 13.1343 |
| **CO2 BAG 2 (Bag 2 Carbon Dioxide)** | 625.7 | -- |
| **FE BAG 2 (Bag 2 Fuel Economy)** | 13.4639 | 13.4639 |
| **CO2 BAG 3 (Bag 3 Carbon Dioxide)** | 490.25 | -- |
| **FE BAG 3 (Bag 3 Fuel Economy)** | 17.1305 | 17.1305 |
| **CO (Carbon Monoxide)** | 1.11 | -- |
| **DT-ASCR (Drive Trace Absolute Speed Change Rating)** | -5.16 | -- |
| **DT-EER (Drive Trace Energy Economy Rating)** | -3.04 | -- |
| **DT-IWRR (Drive Trace Inertia Work Ratio Rating)** | -7.11 | -- |
| **MFR FE (Manufacturer Fuel Economy)** | 14.2275 | 14.2275 |
| **NOX (Nitrogen Oxide)** | 0.025 | -- |
| **HC-NM (Non-methane Hydrocarbon)** | 0.1 | -- |
| **HC-TOTAL (Total Hydrocarbon)** | 0.1298 | -- |

| Test Result Name | Unrounded Test Result | Verify Calculated CO2 |
|---|---|---|
| **Carbon dioxide** | 585.39 | -- |

**Manufacturer Test Comments** 2024MY DB12 V8 EDV

# Certification Summary Information Report

**Test Group** VASXJ04.0AEX **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 70 | CO | 1.1 | -- | -- | -- | 0 | -- | 1 | 10 | Pass |
| Fed | 50,000 miles | Federal Tier 3 Bin 70 | HC-NM | 0.10 | -- | -- | -- | 0.000 | -- | 0.1 | 0.3 | Pass |
| CA | 50,000 miles | California LEV-IV ULEV70 | CO | 1.1 | -- | -- | -- | 0 | -- | 1 | 10 | Pass |
| CA | 50,000 miles | California LEV-IV ULEV70 | HC-NM | 0.10 | -- | -- | -- | 0.000 | -- | 0.1 | 0.3 | Pass |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3A |

| | | | |
|---|---|---|---|
| **Test #** | **RASX10082327** | **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** | 07/25/2023 | **Fuel** | Gasoline |
| **Fuel Batch ID** | 43987 | **Fuel Calibration Number** | 8394 |
| **Vehicle Class** | LDV/Passenger Car | **DF Type** | EPA Assigned |
| **Verify Test Lab ID** | IDIADA Automotive Technology SA | | |
| **E10 Evaporative Test Measurement Method** | -- | | |
| **Test Start Odometer Reading** | 4219 | **Odometer Units** | M |
| **4WD Test Dyno** | No | **Diesel Adjustment Factor Usage** | -- |
| **State of Charge Delta** | -- | | |
| **Drive Cycle Speed Tolerance Criteria** | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec) | **Road Speed Fan Usage** | Yes |

## Test Results

| Test Result Name | Unrounded Test Result | Verify Calculated FE Equivalent Value (miles per gallon) |
|---|---|---|
| **CO (Carbon Monoxide)** | 0.02 | -- |
| **DT-ASCR (Drive Trace Absolute Speed Change Rating)** | 0.48 | -- |
| **DT-EER (Drive Trace Energy Economy Rating)** | -0.05 | -- |
| **DT-IWRR (Drive Trace Inertia Work Ratio Rating)** | 0.88 | -- |
| **MFR FE (Manufacturer Fuel Economy)** | 30.7813 | 30.7813 |
| **NOX (Nitrogen Oxide)** | 0.007 | -- |
| **NMOG (Non-methane organic gases)** | 0.0004 | -- |
| **HC-TOTAL (Total Hydrocarbon)** | 0.0006 | -- |

| Test Result Name | Unrounded Test Result | Verify Calculated CREE/OPT-CREE |
|---|---|---|
| **Carbon-Related Exhaust Emissions** | 284.509 | 999 |

| Test Result Name | Unrounded Test Result | Verify Calculated CO2 |
|---|---|---|
| **Carbon dioxide** | 284.509 | -- |

**Manufacturer Test Comments** 2024MY DB12 V8 EDV

# Certification Summary Information Report

**Test Group** VASXJ04.0AEX **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 70 | CREE | 999 | -- | -- | -- | 0.00 | -- | 999 | -- | -- |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NMOG | 0.0004 | -- | 1.10 | -- | 0.0098 | -- | 0.010 | 999.999 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NMOG+NOX | 0.0074 | -- | 1.10 | -- | -- | -- | 0.024 | 0.070 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NOX | 0.0070 | -- | -- | -- | 0.007 | -- | 0.014 | 999.999 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | CREE | 999 | -- | -- | -- | 0.00 | -- | 999 | -- | -- |
| CA | 150,000 miles | California LEV-IV ULEV70 | NMOG | 0.0004 | -- | 1.10 | -- | 0.0098 | -- | 0.010 | 999.999 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | NMOG+NOX | 0.0074 | -- | 1.10 | -- | -- | -- | 0.024 | 0.070 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | NOX | 0.0070 | -- | -- | -- | 0.007 | -- | 0.014 | 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** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3A |

| | | | |
|---|---|---|---|
| **Test #** | **RASX10082328** | **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** | 07/25/2023 | **Fuel** | Gasoline |
| **Fuel Batch ID** | 43987 | **Fuel Calibration Number** | 8394 |
| **Vehicle Class** | LDV/Passenger Car | **DF Type** | EPA Assigned |
| **Verify Test Lab ID** | IDIADA Automotive Technology SA | | |
| **E10 Evaporative Test Measurement Method** | -- | | |
| **Test Start Odometer Reading** | 4241 | **Odometer Units** | M |
| **4WD Test Dyno** | No | **Diesel Adjustment Factor Usage** | -- |
| **State of Charge Delta** | -- | | |
| **Drive Cycle Speed Tolerance Criteria** | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec) | **Road Speed Fan Usage** | Yes |

## Test Results

| Test Result Name | Unrounded Test Result | Verify Calculated FE Equivalent Value (miles per gallon) |
|---|---|---|
| **CO2 BAG 1 (Bag 1 Carbon Dioxide)** | 629.274 | -- |
| **FE BAG 1 (Bag 1 Fuel Economy)** | 13.92 | 13.92 |
| **CO2 BAG 2 (Bag 2 Carbon Dioxide)** | 346.895 | -- |
| **FE BAG 2 (Bag 2 Fuel Economy)** | 25.23 | 25.23 |
| **CO (Carbon Monoxide)** | 0.14 | -- |
| **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)** | 21.36 | 21.36 |
| **NOX (Nitrogen Oxide)** | 0.02 | -- |
| **HC-NM (Non-methane Hydrocarbon)** | 0.001 | -- |
| **NMOG (Non-methane organic gases)** | 0.001 | -- |
| **PM (Particulate Matter)** | 0.005 | -- |
| **HC-NM+NOX (SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03)** | 0.021 | -- |
| **HC-TOTAL (Total Hydrocarbon)** | 0.0023 | -- |

| Test Result Name | Unrounded Test Result | Verify Calculated CO2 |
|---|---|---|
| **Carbon dioxide** | 409.874 | -- |

**Manufacturer Test Comments** 2024MY DB12 V8 EDV

# Certification Summary Information Report

**Test Group** VASXJ04.0AEX **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 70 | CO | 0.14 | -- | -- | -- | 0.24 | -- | 0.4 | 9.6 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NMOG | 0.0010 | -- | 1.03 | -- | 0.009 | -- | 0.010 | 999.999 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NMOG+NOX | 0.0210 | -- | 1.03 | -- | -- | -- | 0.037 | 0.084 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NOX | 0.0200 | -- | -- | -- | 0.007 | -- | 0.027 | 999.999 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | PM | 0.0050 | -- | -- | -- | 0 | -- | 0.005 | 0.006 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | CO | 0.14 | -- | -- | -- | 0.24 | -- | 0.4 | 9.6 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | NMOG | 0.0010 | -- | 1.03 | -- | 0.0098 | -- | 0.011 | 999.999 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | NMOG+NOX | 0.0210 | -- | 1.03 | -- | -- | -- | 0.038 | 0.084 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | NOX | 0.0200 | -- | -- | -- | 0.0070 | -- | 0.027 | 999.999 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | PM | 0.0050 | -- | -- | -- | 0 | -- | 0.005 | 0.006 | Pass |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3A |

| | | | |
|---|---|---|---|
| **Test #** | **RASX10082336** | **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** | 08/22/2023 | **Fuel** | Gasoline |
| **Fuel Batch ID** | 59318 | **Fuel Calibration Number** | 3658 |
| **Vehicle Class** | LDV/Passenger Car | **DF Type** | EPA Assigned |
| **Verify Test Lab ID** | Mahle Powertrain | | |
| **E10 Evaporative Test Measurement Method** | -- | | |
| **Test Start Odometer Reading** | 4604 | **Odometer Units** | M |
| **4WD Test Dyno** | No | **Diesel Adjustment Factor Usage** | -- |
| **State of Charge Delta** | -- | | |
| **Drive Cycle Speed Tolerance Criteria** | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec) | **Road Speed Fan Usage** | Yes |

## Test Results

| Test Result Name | Unrounded Test Result | Verify Calculated FE Equivalent Value (miles per gallon) |
|---|---|---|
| **CO (Carbon Monoxide)** | 0.35 | -- |
| **DT-ASCR (Drive Trace Absolute Speed Change Rating)** | -2.61 | -- |
| **DT-EER (Drive Trace Energy Economy Rating)** | -1.17 | -- |
| **DT-IWRR (Drive Trace Inertia Work Ratio Rating)** | -2.48 | -- |
| **MFR FE (Manufacturer Fuel Economy)** | 17.2288 | 17.2288 |
| **NOX (Nitrogen Oxide)** | 0.024 | -- |
| **HC-NM (Non-methane Hydrocarbon)** | 0.0018 | -- |
| **NMOG (Non-methane organic gases)** | 0.002 | -- |
| **HC-NM+NOX (SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03)** | 0.0258 | -- |
| **HC-TOTAL (Total Hydrocarbon)** | 0.0137 | -- |

| Test Result Name | Unrounded Test Result | Verify Calculated CO2 |
|---|---|---|
| **Carbon dioxide** | 488.62 | -- |

**Manufacturer Test Comments** 2024MY DB12 V8 EDV

# Certification Summary Information Report

**Test Group** VASXJ04.0AEX **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 70 | CO | 0.35 | -- | -- | -- | 0.24 | -- | 0.6 | 3.2 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NMOG | 0.0020 | -- | 1.03 | -- | 0.009 | -- | 0.011 | 999.999 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NMOG+NOX | 0.0260 | -- | 1.03 | -- | -- | -- | 0.04 | 0.07 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NOX | 0.0240 | -- | -- | -- | 0.007 | -- | 0.031 | 999.999 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | CO | 0.35 | -- | -- | -- | 0.24 | -- | 0.6 | 3.2 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | NMOG | 0.0020 | -- | 1.03 | -- | 0.0098 | -- | 0.012 | 999.999 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | NMOG+NOX | 0.0260 | -- | 1.03 | -- | -- | -- | 0.04 | 0.07 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | NOX | 0.0240 | -- | -- | -- | 0.0070 | -- | 0.031 | 999.999 | Pass |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **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 | VASXJ04.0AEX | 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** | VASXJ04.0AEX | **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** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3A |

## Fuel Properties

| | | | |
|---|---|---|---|
| **Fuel Batch ID** | **59318** | **Fuel Calibration Number** | **3658** |
| **Test Fuel Type** | 49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.) | **Fuel Batch Calibration Date** | 07/17/2023 |
| **Fuel Batch Calibration Effective Date** | 07/17/2023 | **Fuel Batch Calibration Ineffective Date** | 07/17/2025 |
| **Carbon Weight Fraction NMHC** | -- | **Carbon Weight Fraction HC** | -- |
| **Exhaust Carbon Weight Fraction** | 0.799 | **Fuel Methanol Volume Fraction** | -- |
| **Fuel Density (grams/cubic ft)** | -- | **Fuel Specific Gravity** | 0.753 |
| **Fuel Ethanol Volume Percent (%)** | 9.5 | **Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)** | 17923 |
| **Fuel Net Heat of Combustion (E10) (MJ/kg)** | -- | **Fuel Carbon Mass Fraction (E10)** | -- |
| **Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)** | 0.799 | **Weight Fraction CO2** | -- |

| | | | |
|---|---|---|---|
| **Fuel Batch ID** | **43987** | **Fuel Calibration Number** | **8394** |
| **Test Fuel Type** | 49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.) | **Fuel Batch Calibration Date** | 01/17/2022 |
| **Fuel Batch Calibration Effective Date** | 01/17/2022 | **Fuel Batch Calibration Ineffective Date** | 01/17/2024 |
| **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** | **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** | **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 |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3A |
| **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** | **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 |
| **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** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3A |
|---|---|---|---|

## Consolidated List of Standards

### Exhaust Standards

**Cert Region** Federal
**Vehicle Class** LDV/Passenger Car
**Fuel** Gasoline
**Cert/In-Use Code** Cert
**Standard Level** Federal Tier 3 Bin 70
**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 | -- | -- | -- | -- | -- | -- | 0.24 | 9.6 |
| 150,000 miles | NMOG | -- | -- | 1.03 | -- | -- | -- | 0.009 | 999.999 |
| 150,000 miles | NMOG+NOX | -- | -- | 1.03 | -- | -- | -- | 0.0168 | 0.084 |
| 150,000 miles | NOX | -- | -- | -- | -- | -- | -- | 0.007 | 999.999 |
| 150,000 miles | PM | -- | -- | -- | -- | -- | -- | 0 | 0.006 |

**Cert Region** California + CAA Section 177 states
**Vehicle Class** LDV/Passenger Car
**Fuel** Gasoline
**Cert/In-Use Code** Cert
**Standard Level** California LEV-IV ULEV70
**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 | 1.7 |
| 50,000 miles | HCHO | -- | -- | -- | -- | -- | -- | 0 | 0.016 |
| 50,000 miles | NMOG | -- | -- | -- | -- | -- | -- | 0 | 999.999 |
| 50,000 miles | NMOG+NOX | -- | 1 | 1.10 | -- | -- | -- | 0 | 0.14 |
| 50,000 miles | NOX | -- | -- | -- | -- | -- | -- | 0 | 999.999 |

**Cert Region** California + CAA Section 177 states
**Vehicle Class** LDV/Passenger Car
**Fuel** Gasoline
**Cert/In-Use Code** Cert
**Standard Level** California LEV-IV ULEV70
**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 | -- | -- | -- | -- | -- | -- | 0.24 | 3.2 |
| 150,000 miles | NMOG | -- | -- | 1.03 | -- | -- | -- | 0.0098 | 999.999 |
| 150,000 miles | NMOG+NOX | -- | -- | 1.03 | -- | -- | -- | 0.01680 | 0.07 |
| 150,000 miles | NOX | -- | -- | -- | -- | -- | -- | 0.0070 | 999.999 |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3A |

| | | | |
|---|---|---|---|
| **Cert Region** | Federal | **Cert/In-Use Code** | Cert |
| **Vehicle Class** | LDV/Passenger Car | **Standard Level** | Federal Tier 3 Bin 70 |
| **Fuel** | Gasoline | **Test Procedure** | HWFE |

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 150,000 miles | CREE | -- | -- | -- | -- | -- | -- | 0.00 | 999.999 |
| 150,000 miles | NMOG | -- | -- | 1.10 | -- | -- | -- | 0.0098 | 999.999 |
| 150,000 miles | NMOG+NOX | -- | -- | 1.10 | -- | -- | -- | 0.0168 | 0.070 |
| 150,000 miles | NOX | -- | -- | -- | -- | -- | -- | 0.007 | 999.999 |

| | | | |
|---|---|---|---|
| **Cert Region** | California + CAA Section 177 states | **Cert/In-Use Code** | Cert |
| **Vehicle Class** | LDV/Passenger Car | **Standard Level** | California LEV-IV ULEV70 |
| **Fuel** | Gasoline | **Test Procedure** | HWFE |

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 150,000 miles | CREE | -- | -- | -- | -- | -- | -- | 0.00 | 999.999 |
| 150,000 miles | NMOG | -- | -- | 1.10 | -- | -- | -- | 0.0098 | 999.999 |
| 150,000 miles | NMOG+NOX | -- | -- | 1.10 | -- | -- | -- | 0.0168 | 0.070 |
| 150,000 miles | NOX | -- | -- | -- | -- | -- | -- | 0.007 | 999.999 |

| | | | |
|---|---|---|---|
| **Cert Region** | Federal | **Cert/In-Use Code** | Cert |
| **Vehicle Class** | LDV/Passenger Car | **Standard Level** | Federal Tier 3 Bin 70 |
| **Fuel** | Gasoline | **Test Procedure** | SC03 |

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 150,000 miles | CO | -- | -- | -- | -- | -- | -- | 0.24 | 3.2 |
| 150,000 miles | NMOG | -- | -- | 1.03 | -- | -- | -- | 0.009 | 999.999 |
| 150,000 miles | NMOG+NOX | -- | -- | 1.03 | -- | -- | -- | 0.016 | 0.07 |
| 150,000 miles | NOX | -- | -- | -- | -- | -- | -- | 0.007 | 999.999 |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3A |
| **Cert Region** | Federal | **Cert/In-Use Code** | Cert |
| **Vehicle Class** | LDV/Passenger Car | **Standard Level** | Federal Tier 3 Bin 70 |
| **Fuel** | Gasoline | **Test Procedure** | Federal fuel 2-day exhaust (w/can load) |

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 150,000 miles | CO | -- | -- | -- | -- | -- | -- | 0.24 | 1.7 |
| 150,000 miles | CO-COMP | -- | -- | -- | -- | -- | -- | 0 | 4.2 |
| 150,000 miles | CREE | -- | -- | -- | -- | -- | -- | 0.000 | 999.999 |
| 150,000 miles | HCHO | -- | -- | -- | -- | -- | -- | 0.0003 | 0.004 |
| 150,000 miles | METHANE | -- | -- | -- | -- | -- | -- | 0.000 | 0.03 |
| 150,000 miles | N2O | -- | -- | -- | -- | -- | -- | 0.007 | 0.01 |
| 150,000 miles | NMOG | -- | 1 | 1.10 | -- | -- | -- | 0.0098 | 999.999 |
| 150,000 miles | NMOG+NOX | -- | -- | 1.10 | -- | -- | -- | 0.0168 | 0.070 |
| 150,000 miles | NMOG+NOX-COMP | -- | -- | 1.10 | -- | -- | -- | 0 | 0.050 |
| 150,000 miles | NOX | -- | -- | -- | -- | -- | -- | 0.007 | 999.999 |
| 150,000 miles | PM | -- | -- | -- | -- | -- | -- | 0 | 0.003 |

| | | | |
|---|---|---|---|
| **Cert Region** | California + CAA Section 177 states | **Cert/In-Use Code** | Cert |
| **Vehicle Class** | LDV/Passenger Car | **Standard Level** | California LEV-IV ULEV70 |
| **Fuel** | Gasoline | **Test Procedure** | US06 |

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 150,000 miles | CO | -- | -- | -- | -- | -- | -- | 0.24 | 9.6 |
| 150,000 miles | NMOG | -- | -- | 1.03 | -- | -- | -- | 0.0098 | 999.999 |
| 150,000 miles | NMOG+NOX | -- | -- | 1.03 | -- | -- | -- | 0.01680 | 0.084 |
| 150,000 miles | NOX | -- | -- | -- | -- | -- | -- | 0.0070 | 999.999 |
| 150,000 miles | PM | -- | -- | -- | -- | -- | -- | 0 | 0.006 |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **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 ULEV70 |
| **Fuel** | Gasoline | **Test Procedure** | Cold CO |

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 50,000 miles | CO | -- | -- | -- | -- | -- | -- | 0 | 10 |
| 50,000 miles | HC-NM | -- | -- | -- | -- | -- | -- | 0.000 | 0.3 |

| | | | |
|---|---|---|---|
| **Cert Region** | California + CAA Section 177 states | **Cert/In-Use Code** | Cert |
| **Vehicle Class** | LDV/Passenger Car | **Standard Level** | California LEV-IV ULEV70 |
| **Fuel** | Gasoline | **Test Procedure** | Federal fuel 2-day exhaust (w/can load) |

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 150,000 miles | CO | -- | -- | -- | -- | -- | -- | 0.24 | 1.7 |
| 150,000 miles | CREE | -- | -- | -- | -- | -- | -- | 0.000 | 999.999 |
| 150,000 miles | HCHO | -- | -- | -- | -- | -- | -- | 0.0003 | 0.004 |
| 150,000 miles | METHANE | -- | -- | -- | -- | -- | -- | 0.000 | 0.03 |
| 150,000 miles | N2O | -- | -- | -- | -- | -- | -- | 0.007 | 0.01 |
| 150,000 miles | NMOG | -- | 1 | 1.10 | -- | -- | -- | 0.0098 | 999.999 |
| 150,000 miles | NMOG+NOX | -- | -- | 1.10 | -- | -- | -- | 0.0168 | 0.070 |
| 150,000 miles | NOX | -- | -- | -- | -- | -- | -- | 0.007 | 999.999 |
| 150,000 miles | PM | -- | -- | -- | -- | -- | -- | 0 | 0.003 |

| | | | |
|---|---|---|---|
| **Cert Region** | Federal | **Cert/In-Use Code** | Cert |
| **Vehicle Class** | LDV/Passenger Car | **Standard Level** | Federal Tier 3 Bin 70 |
| **Fuel** | Gasoline | **Test Procedure** | Cold CO |

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 50,000 miles | CO | -- | -- | -- | -- | -- | -- | 0 | 10 |
| 50,000 miles | HC-NM | -- | -- | -- | -- | -- | -- | 0.000 | 0.3 |

## Evaporative/Refueling Standards

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **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** | 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** | Federal fuel 3-day evap | | |

| Fuel | Useful Life | Emission Name | Rounded Result | Std | Add DF |
|---|---|---|---|---|---|
| Gasoline | 150,000 miles | HC-TOTAL-EQUIV | -- | 0.275 | 0.0021 |

| | | | |
|---|---|---|---|
| **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 |

| | | | |
|---|---|---|---|
| **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 |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3A |

| | | | |
|---|---|---|---|
| **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 | 0.006 |

| | | | |
|---|---|---|---|
| **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** | 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 | 0.006 |

| | | | |
|---|---|---|---|
| **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 | -- | 0.275 | 0.0021 |

| | | | |
|---|---|---|---|
| **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 |

# Certification Summary Information Report

| **Test Group** | VASXJ04.0AEX | **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** | VASXJ04.0AEX | **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** | VASXJ04.0AEX | **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** | VASXJ04.0AEX | **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 |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Manufacturer** | Aston Martin Lagonda | **Manufacturer Code** | ASX |
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |
| **Certificate Number** | -- | **CARB Executive Order #** | -- |
| **Certificate Issue Date** | -- | **Certificate Revision Date** | -- |
| **Certificate Effective Date** | -- | **Conditional Certificate** | -- |
| **CSI Revision #** | -- | **CSI Submission/Revision Date** | 05/06/2026 08:58:45 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 | Spark Ignition Direct 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** | VASXGPGNNE23 | **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** | J1979-2 OBD on UDS | | |
| **Mfr Test Group Comments** | -- | | |
| **Mfr Exhaust / Evap Standards Comments** | -- | | |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |

## Evaporative/Refueling Family Information

| | | | |
|---|---|---|---|
| **Evaporative Summary Information Type** | New | **Submission/Correction Date** | 05/06/2026 03:07:53 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** | LDT 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 |
|---|---|---|---|
| VASXR0160T3B-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 | 840 - DBX | California + CAA Section 177 states | 4-Wheel Drive | Automatic | 9 | Yes |
| Aston Martin Lagonda | 1 - Aston Martin Lagonda Ltd | 840 - DBX | Federal | 4-Wheel Drive | Automatic | 9 | 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** | 8 | **Mechanically Variable Compression Ratio Indicator** | N |

# Certification Summary Information Report

| Test Group | VASXJ04.0AEX | Evaporative/Refueling Family | VASXR0160T3B |
|---|---|---|---|

## 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** | Warm up primary element per bank plus an underfloor mounted secondary element per bank. |
| **Direct Ozone Reduction (DOR) Device** | Not Equipped |
| **Mfr Emission Control Device Comments** | -- |

## Engine Configuration Number 1

| | | | |
|---|---|---|---|
| **Engine Displacement (liters)** | 4.0 | **Engine Rated Horsepower** | 665 |
| **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** | No | | |
| **Air Injection Type** | Not Applicable | **Air Injection Type if 'Other'** | -- |
| **Mfr Engine Configuration Comments** | Vantage Power Spec | | |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |

## Engine Configuration Number 2

| | | | |
|---|---|---|---|
| **Engine Displacement (liters)** | 4.0 | **Engine Rated Horsepower** | 680 |
| **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** | No | | |
| **Air Injection Type** | -- | **Air Injection Type if 'Other'** | -- |
| **Mfr Engine Configuration Comments** | Vantage S and DB12 power spec | | |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |

## Engine Configuration Number 3

| | | | |
|---|---|---|---|
| **Engine Displacement (liters)** | 4.0 | **Engine Rated Horsepower** | 700 |
| **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** | No | | |
| **Air Injection Type** | -- | **Air Injection Type if 'Other'** | -- |
| **Mfr Engine Configuration Comments** | DB12 S power spec | | |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |

## Engine Configuration Number 4

| | | | |
|---|---|---|---|
| **Engine Displacement (liters)** | 4.0 | **Engine Rated Horsepower** | 727 |
| **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** | Individual cylinder de-activation hardware is installed, but not used | | |
| **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** | No | | |
| **Air Injection Type** | -- | **Air Injection Type if 'Other'** | -- |
| **Mfr Engine Configuration Comments** | DBX S and GT power Spec | | |

## 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 | RASX10082324 | RASX10082328 | RASX10082336 | RASX10082335 | RASX10082327 | 16.1 | 228.2 | 31.0 | 286.1 | -- |

## SFTP LEV-III Official Test Numbers

| Test Group Fuel | FTP | US06 | SC03 |
|---|---|---|---|
| Gasoline | RASX10082324 | RASX10082328 | RASX10082336 |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |

## Emission Data Vehicle Information

| | | | |
|---|---|---|---|
| **Vehicle ID / Configuration** | 5723PT5601 / 0 | **Manufacturer Vehicle Configuration Number** | 0 |
| **Original Test Group Name** | RASXV04.0AES | **Original Evaporative/Refueling Family** | RASXR0160T3A |
| **Original Test Vehicle Model Year** | 2024 | | |

## Vehicle Model

| | | | |
|---|---|---|---|
| **Represented Test Vehicle Make** | Aston Martin | **Represented Test Vehicle Model** | DB12 V8 |

## Leak Family Details

| | | | |
|---|---|---|---|
| **Leak Family Identifier** | 001 | **Leak Family Name** | RASXR0160T3A-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** | 177850 | **Rated Horsepower** | 680 |
| **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)** | 4024 | **Equivalent Test Weight (pounds)** | 4500 |
| **GVWR (lbs)** | -- | **N/V Ratio** | 24.8 |
| **Axle Ratio** | 3.08 | | |
| **Transmission Type** | Automatic | **# of Transmission Gears** | 8 |
| **Transmission Lockup** | Yes | **Creeper Gear** | No |

# Certification Summary Information Report

| Test Group | VASXJ04.0AEX | Evaporative/Refueling Family | VASXR0160T3B |
|---|---|---|---|

## 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** | 53.24 | 0.2228 | 0.0221 | 5.67 | 0.0083 | 0.0221 | 16 |
| **Cold CO** | 58.56 | 0.2451 | 0.0243 | 7.89 | 0.1957 | 0.0196 | N/A |
| **US06** | 53.24 | 0.2228 | 0.0221 | 5.67 | 0.0083 | 0.0221 | N/A |

**Emission Control Device Comments** --

**Manufacturer Test Vehicle Comments** 2024MY DB12 V8 Coupe 8 speed auto

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |

| | | | |
|---|---|---|---|
| **Test #** | **RASX10082324** | **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** | 07/26/2023 | **Fuel** | Gasoline |
| **Fuel Batch ID** | 43987 | **Fuel Calibration Number** | 8394 |
| **Vehicle Class** | LDV/Passenger Car | **DF Type** | EPA Assigned |
| **Verify Test Lab ID** | IDIADA Automotive Technology SA | | |
| **E10 Evaporative Test Measurement Method** | -- | | |
| **Test Start Odometer Reading** | 4267 | **Odometer Units** | M |
| **4WD Test Dyno** | No | **Diesel Adjustment Factor Usage** | -- |
| **State of Charge Delta** | -- | | |
| **Drive Cycle Speed Tolerance Criteria** | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec) | **Road Speed Fan Usage** | Yes |

## Test Results

| Test Result Name | Unrounded Test Result | Verify Calculated FE Equivalent Value (miles per gallon) |
|---|---|---|
| **CO2 BAG 1 (Bag 1 Carbon Dioxide)** | 527.833 | -- |
| **FE BAG 1 (Bag 1 Fuel Economy)** | 16.4993 | 16.4993 |
| **CO2 BAG 2 (Bag 2 Carbon Dioxide)** | 565.283 | -- |
| **FE BAG 2 (Bag 2 Fuel Economy)** | 15.4886 | 15.4886 |
| **CO2 BAG 3 (Bag 3 Carbon Dioxide)** | 418.11 | -- |
| **FE BAG 3 (Bag 3 Fuel Economy)** | 20.9211 | 20.9211 |
| **METHANE (CH4 - Methane)** | 0.008 | -- |
| **CO (Carbon Monoxide)** | 0.503 | -- |
| **DT-ASCR (Drive Trace Absolute Speed Change Rating)** | 1.34 | -- |
| **DT-EER (Drive Trace Energy Economy Rating)** | 0.11 | -- |
| **DT-IWRR (Drive Trace Inertia Work Ratio Rating)** | 1.46 | -- |
| **HCHO (Formaldehyde)** | 0.0009 | -- |
| **MFR FE (Manufacturer Fuel Economy)** | 16.908 | 16.908 |
| **NOX (Nitrogen Oxide)** | 0.009 | -- |
| **N2O (Nitrous Oxide)** | 0.003 | -- |
| **HC-NM (Non-methane Hydrocarbon)** | 0.018 | -- |
| **NMOG (Non-methane organic gases)** | 0.0195 | -- |
| **PM (Particulate Matter)** | 0.001 | -- |
| **HC-TOTAL (Total Hydrocarbon)** | 0.0248 | -- |

# Certification Summary Information Report

| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |
|---|---|---|---|

| Test Result Name | Unrounded Test Result | Verify Calculated CREE/OPT-CREE |
|---|---|---|
| **Carbon-Related Exhaust Emissions** | 517.14 | 999 |

| Test Result Name | Unrounded Test Result | Verify Calculated CO2 |
|---|---|---|
| **Carbon dioxide** | 517.14 | -- |

**Manufacturer Test Comments** 2024MY DB12 V8 EDV

# Certification Summary Information Report

**Test Group** VASXJ04.0AEX **Evaporative/Refueling Family** VASXR0160T3B

| 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 70 | CO | 0.50 | -- | -- | -- | 0.24 | -- | 0.7 | 1.7 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | CO-COMP | 0.58 | -- | -- | -- | 0 | -- | 0.6 | 4.2 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | CREE | 999 | -- | -- | -- | 0.000 | -- | 999 | -- | -- |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | HCHO | 0.0009 | -- | -- | -- | 0.0003 | -- | 0.001 | 0.004 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | METHANE | 0.008 | -- | -- | -- | 0.000 | -- | 0.01 | 0.03 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | N2O | 0.003 | -- | -- | -- | 0.007 | -- | 0.01 | 0.01 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NMOG | 0.0195 | 1 | 1.10 | -- | 0.0098 | -- | 0.029 | 999.999 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NMOG+NOX | 0.0285 | -- | 1.10 | -- | -- | -- | 0.045 | 0.070 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NMOG+NOX-COMP | 0.0418 | -- | 1.10 | -- | 0 | -- | 0.042 | 0.050 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NOX | 0.0090 | -- | -- | -- | 0.007 | -- | 0.016 | 999.999 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | PM | 0.0010 | -- | -- | -- | 0 | -- | 0.001 | 0.003 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | CO | 0.50 | -- | -- | -- | 0.24 | -- | 0.7 | 1.7 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | CREE | 999 | -- | -- | -- | 0.000 | -- | 999 | -- | -- |
| CA | 150,000 miles | California LEV-IV ULEV70 | HCHO | 0.0009 | -- | -- | -- | 0.0003 | -- | 0.001 | 0.004 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | METHANE | 0.008 | -- | -- | -- | 0.000 | -- | 0.01 | 0.03 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | N2O | 0.003 | -- | -- | -- | 0.007 | -- | 0.01 | 0.01 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | NMOG | 0.0195 | 1 | 1.10 | -- | 0.0098 | -- | 0.029 | 999.999 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | NMOG+NOX | 0.0285 | -- | 1.10 | -- | -- | -- | 0.045 | 0.070 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | NOX | 0.0090 | -- | -- | -- | 0.007 | -- | 0.016 | 999.999 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | PM | 0.0010 | -- | -- | -- | 0 | -- | 0.001 | 0.003 | Pass |

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

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |

| | | | |
|---|---|---|---|
| **Test #** | **RASX10082329** | **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** | 08/16/2023 | **Fuel** | Gasoline |
| **Fuel Batch ID** | 59318 | **Fuel Calibration Number** | 3658 |
| **Vehicle Class** | LDV/Passenger Car | **DF Type** | EPA Assigned |
| **Verify Test Lab ID** | Mahle Powertrain | | |
| **E10 Evaporative Test Measurement Method** | -- | | |
| **Test Start Odometer Reading** | 4493 | **Odometer Units** | M |
| **4WD Test Dyno** | No | **Diesel Adjustment Factor Usage** | -- |
| **State of Charge Delta** | -- | | |
| **Drive Cycle Speed Tolerance Criteria** | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec) | **Road Speed Fan Usage** | Yes |

## Test Results

| Test Result Name | Unrounded Test Result | Verify Calculated FE Equivalent Value (miles per gallon) |
|---|---|---|
| **CO (Carbon Monoxide)** | 0.62 | -- |
| **DT-ASCR (Drive Trace Absolute Speed Change Rating)** | -2.7 | -- |
| **DT-EER (Drive Trace Energy Economy Rating)** | -0.189 | -- |
| **DT-IWRR (Drive Trace Inertia Work Ratio Rating)** | -3.79 | -- |
| **HCHO (Formaldehyde)** | 0.0002 | -- |
| **MFR FE (Manufacturer Fuel Economy)** | 16.4971 | 16.4971 |
| **NOX (Nitrogen Oxide)** | 0.014 | -- |
| **NMOG (Non-methane organic gases)** | 0.0321 | -- |
| **PM (Particulate Matter)** | 0.005 | -- |
| **HC-TOTAL (Total Hydrocarbon)** | 0.0402 | -- |

| Test Result Name | Unrounded Test Result | Verify Calculated CO2 |
|---|---|---|
| **Carbon dioxide** | 499.31 | -- |

**Manufacturer Test Comments** 2024MY DB12 V8 EDV

# Certification Summary Information Report

**Test Group** VASXJ04.0AEX **Evaporative/Refueling Family** VASXR0160T3B

| 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 ULEV70 | CO | 0.62 | -- | -- | -- | 0 | -- | 0.6 | 1.7 | Pass |
| CA | 50,000 miles | California LEV-IV ULEV70 | HCHO | 0.0002 | -- | -- | -- | 0 | -- | 0.000 | 0.016 | Pass |
| CA | 50,000 miles | California LEV-IV ULEV70 | NMOG | 0.0321 | -- | -- | -- | 0 | -- | 0.032 | 999.999 | Pass |
| CA | 50,000 miles | California LEV-IV ULEV70 | NMOG+NOX | 0.0461 | 1 | 1.10 | -- | -- | -- | 0.05 | 0.14 | Pass |
| CA | 50,000 miles | California LEV-IV ULEV70 | NOX | 0.0140 | -- | -- | -- | 0 | -- | 0.014 | 999.999 | Pass |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |

| | | | |
|---|---|---|---|
| **Test #** | **RASX10082335** | **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** | 08/18/2023 | **Fuel** | Gasoline |
| **Fuel Batch ID** | 59318 | **Fuel Calibration Number** | 3658 |
| **Vehicle Class** | LDV/Passenger Car | **DF Type** | EPA Assigned |
| **Verify Test Lab ID** | Mahle Powertrain | | |
| **E10 Evaporative Test Measurement Method** | -- | | |
| **Test Start Odometer Reading** | 4545 | **Odometer Units** | M |
| **4WD Test Dyno** | No | **Diesel Adjustment Factor Usage** | -- |
| **State of Charge Delta** | -- | | |
| **Drive Cycle Speed Tolerance Criteria** | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec) | **Road Speed Fan Usage** | Yes |

## Test Results

| Test Result Name | Unrounded Test Result | Verify Calculated FE Equivalent Value (miles per gallon) |
|---|---|---|
| **CO2 BAG 1 (Bag 1 Carbon Dioxide)** | 637.23 | -- |
| **FE BAG 1 (Bag 1 Fuel Economy)** | 13.1343 | 13.1343 |
| **CO2 BAG 2 (Bag 2 Carbon Dioxide)** | 625.7 | -- |
| **FE BAG 2 (Bag 2 Fuel Economy)** | 13.4639 | 13.4639 |
| **CO2 BAG 3 (Bag 3 Carbon Dioxide)** | 490.25 | -- |
| **FE BAG 3 (Bag 3 Fuel Economy)** | 17.1305 | 17.1305 |
| **CO (Carbon Monoxide)** | 1.11 | -- |
| **DT-ASCR (Drive Trace Absolute Speed Change Rating)** | -5.16 | -- |
| **DT-EER (Drive Trace Energy Economy Rating)** | -3.04 | -- |
| **DT-IWRR (Drive Trace Inertia Work Ratio Rating)** | -7.11 | -- |
| **MFR FE (Manufacturer Fuel Economy)** | 14.2275 | 14.2275 |
| **NOX (Nitrogen Oxide)** | 0.025 | -- |
| **HC-NM (Non-methane Hydrocarbon)** | 0.1 | -- |
| **HC-TOTAL (Total Hydrocarbon)** | 0.1298 | -- |

| Test Result Name | Unrounded Test Result | Verify Calculated CO2 |
|---|---|---|
| **Carbon dioxide** | 585.39 | -- |

**Manufacturer Test Comments** 2024MY DB12 V8 EDV

# Certification Summary Information Report

**Test Group** VASXJ04.0AEX **Evaporative/Refueling Family** VASXR0160T3B

| Certification Region | Useful Life | Standard Level | Emission Name | Rounded Result | RAF | NMOG/NM HC Ratio | Diesel Adjustment Factor | Add DF | Mult DF | Certification Level | Standard | Pass/Fail |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fed | 50,000 miles | Federal Tier 3 Bin 70 | CO | 1.1 | -- | -- | -- | 0 | -- | 1 | 10 | Pass |
| Fed | 50,000 miles | Federal Tier 3 Bin 70 | HC-NM | 0.10 | -- | -- | -- | 0.000 | -- | 0.1 | 0.3 | Pass |
| CA | 50,000 miles | California LEV-IV ULEV70 | CO | 1.1 | -- | -- | -- | 0 | -- | 1 | 10 | Pass |
| CA | 50,000 miles | California LEV-IV ULEV70 | HC-NM | 0.10 | -- | -- | -- | 0.000 | -- | 0.1 | 0.3 | Pass |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |

| | | | |
|---|---|---|---|
| **Test #** | **RASX10082327** | **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** | 07/25/2023 | **Fuel** | Gasoline |
| **Fuel Batch ID** | 43987 | **Fuel Calibration Number** | 8394 |
| **Vehicle Class** | LDV/Passenger Car | **DF Type** | EPA Assigned |
| **Verify Test Lab ID** | IDIADA Automotive Technology SA | | |
| **E10 Evaporative Test Measurement Method** | -- | | |
| **Test Start Odometer Reading** | 4219 | **Odometer Units** | M |
| **4WD Test Dyno** | No | **Diesel Adjustment Factor Usage** | -- |
| **State of Charge Delta** | -- | | |
| **Drive Cycle Speed Tolerance Criteria** | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec) | **Road Speed Fan Usage** | Yes |

## Test Results

| Test Result Name | Unrounded Test Result | Verify Calculated FE Equivalent Value (miles per gallon) |
|---|---|---|
| CO (Carbon Monoxide) | 0.02 | -- |
| DT-ASCR (Drive Trace Absolute Speed Change Rating) | 0.48 | -- |
| DT-EER (Drive Trace Energy Economy Rating) | -0.05 | -- |
| DT-IWRR (Drive Trace Inertia Work Ratio Rating) | 0.88 | -- |
| MFR FE (Manufacturer Fuel Economy) | 30.7813 | 30.7813 |
| NOX (Nitrogen Oxide) | 0.007 | -- |
| NMOG (Non-methane organic gases) | 0.0004 | -- |
| HC-TOTAL (Total Hydrocarbon) | 0.0006 | -- |

| Test Result Name | Unrounded Test Result | Verify Calculated CREE/OPT-CREE |
|---|---|---|
| Carbon-Related Exhaust Emissions | 284.509 | 999 |

| Test Result Name | Unrounded Test Result | Verify Calculated CO2 |
|---|---|---|
| Carbon dioxide | 284.509 | -- |

**Manufacturer Test Comments** 2024MY DB12 V8 EDV

# Certification Summary Information Report

**Test Group** VASXJ04.0AEX **Evaporative/Refueling Family** VASXR0160T3B

| Certification Region | Useful Life | Standard Level | Emission Name | Rounded Result | RAF | NMOG/NM HC Ratio | Diesel Adjustment Factor | Add DF | Mult DF | Certification Level | Standard | Pass/Fail |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | CREE | 999 | -- | -- | -- | 0.00 | -- | 999 | -- | -- |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NMOG | 0.0004 | -- | 1.10 | -- | 0.0098 | -- | 0.010 | 999.999 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NMOG+NOX | 0.0074 | -- | 1.10 | -- | -- | -- | 0.024 | 0.070 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NOX | 0.0070 | -- | -- | -- | 0.007 | -- | 0.014 | 999.999 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | CREE | 999 | -- | -- | -- | 0.00 | -- | 999 | -- | -- |
| CA | 150,000 miles | California LEV-IV ULEV70 | NMOG | 0.0004 | -- | 1.10 | -- | 0.0098 | -- | 0.010 | 999.999 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | NMOG+NOX | 0.0074 | -- | 1.10 | -- | -- | -- | 0.024 | 0.070 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | NOX | 0.0070 | -- | -- | -- | 0.007 | -- | 0.014 | 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** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |

| | | | |
|---|---|---|---|
| **Test #** | **RASX10082328** | **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** | 07/25/2023 | **Fuel** | Gasoline |
| **Fuel Batch ID** | 43987 | **Fuel Calibration Number** | 8394 |
| **Vehicle Class** | LDV/Passenger Car | **DF Type** | EPA Assigned |
| **Verify Test Lab ID** | IDIADA Automotive Technology SA | | |
| **E10 Evaporative Test Measurement Method** | -- | | |
| **Test Start Odometer Reading** | 4241 | **Odometer Units** | M |
| **4WD Test Dyno** | No | **Diesel Adjustment Factor Usage** | -- |
| **State of Charge Delta** | -- | | |
| **Drive Cycle Speed Tolerance Criteria** | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec) | **Road Speed Fan Usage** | Yes |

## Test Results

| Test Result Name | Unrounded Test Result | Verify Calculated FE Equivalent Value (miles per gallon) |
|---|---|---|
| **CO2 BAG 1 (Bag 1 Carbon Dioxide)** | 629.274 | -- |
| **FE BAG 1 (Bag 1 Fuel Economy)** | 13.92 | 13.92 |
| **CO2 BAG 2 (Bag 2 Carbon Dioxide)** | 346.895 | -- |
| **FE BAG 2 (Bag 2 Fuel Economy)** | 25.23 | 25.23 |
| **CO (Carbon Monoxide)** | 0.14 | -- |
| **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)** | 21.36 | 21.36 |
| **NOX (Nitrogen Oxide)** | 0.02 | -- |
| **HC-NM (Non-methane Hydrocarbon)** | 0.001 | -- |
| **NMOG (Non-methane organic gases)** | 0.001 | -- |
| **PM (Particulate Matter)** | 0.005 | -- |
| **HC-NM+NOX (SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03)** | 0.021 | -- |
| **HC-TOTAL (Total Hydrocarbon)** | 0.0023 | -- |

| Test Result Name | Unrounded Test Result | Verify Calculated CO2 |
|---|---|---|
| **Carbon dioxide** | 409.874 | -- |

**Manufacturer Test Comments** 2024MY DB12 V8 EDV

# Certification Summary Information Report

**Test Group** VASXJ04.0AEX **Evaporative/Refueling Family** VASXR0160T3B

| Certification Region | Useful Life | Standard Level | Emission Name | Rounded Result | RAF | NMOG/NM HC Ratio | Diesel Adjustment Factor | Add DF | Mult DF | Certification Level | Standard | Pass/Fail |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | CO | 0.14 | -- | -- | -- | 0.24 | -- | 0.4 | 9.6 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NMOG | 0.0010 | -- | 1.03 | -- | 0.009 | -- | 0.010 | 999.999 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NMOG+NOX | 0.0210 | -- | 1.03 | -- | -- | -- | 0.037 | 0.084 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NOX | 0.0200 | -- | -- | -- | 0.007 | -- | 0.027 | 999.999 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | PM | 0.0050 | -- | -- | -- | 0 | -- | 0.005 | 0.006 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | CO | 0.14 | -- | -- | -- | 0.24 | -- | 0.4 | 9.6 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | NMOG | 0.0010 | -- | 1.03 | -- | 0.0098 | -- | 0.011 | 999.999 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | NMOG+NOX | 0.0210 | -- | 1.03 | -- | -- | -- | 0.038 | 0.084 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | NOX | 0.0200 | -- | -- | -- | 0.0070 | -- | 0.027 | 999.999 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | PM | 0.0050 | -- | -- | -- | 0 | -- | 0.005 | 0.006 | Pass |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |

| | | | |
|---|---|---|---|
| **Test #** | **RASX10082336** | **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** | 08/22/2023 | **Fuel** | Gasoline |
| **Fuel Batch ID** | 59318 | **Fuel Calibration Number** | 3658 |
| **Vehicle Class** | LDV/Passenger Car | **DF Type** | EPA Assigned |
| **Verify Test Lab ID** | Mahle Powertrain | | |
| **E10 Evaporative Test Measurement Method** | -- | | |
| **Test Start Odometer Reading** | 4604 | **Odometer Units** | M |
| **4WD Test Dyno** | No | **Diesel Adjustment Factor Usage** | -- |
| **State of Charge Delta** | -- | | |
| **Drive Cycle Speed Tolerance Criteria** | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec) | **Road Speed Fan Usage** | Yes |

## Test Results

| Test Result Name | Unrounded Test Result | Verify Calculated FE Equivalent Value (miles per gallon) |
|---|---|---|
| **CO (Carbon Monoxide)** | 0.35 | -- |
| **DT-ASCR (Drive Trace Absolute Speed Change Rating)** | -2.61 | -- |
| **DT-EER (Drive Trace Energy Economy Rating)** | -1.17 | -- |
| **DT-IWRR (Drive Trace Inertia Work Ratio Rating)** | -2.48 | -- |
| **MFR FE (Manufacturer Fuel Economy)** | 17.2288 | 17.2288 |
| **NOX (Nitrogen Oxide)** | 0.024 | -- |
| **HC-NM (Non-methane Hydrocarbon)** | 0.0018 | -- |
| **NMOG (Non-methane organic gases)** | 0.002 | -- |
| **HC-NM+NOX (SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03)** | 0.0258 | -- |
| **HC-TOTAL (Total Hydrocarbon)** | 0.0137 | -- |

| Test Result Name | Unrounded Test Result | Verify Calculated CO2 |
|---|---|---|
| **Carbon dioxide** | 488.62 | -- |

**Manufacturer Test Comments** 2024MY DB12 V8 EDV

# Certification Summary Information Report

**Test Group** VASXJ04.0AEX **Evaporative/Refueling Family** VASXR0160T3B

| 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 70 | CO | 0.35 | -- | -- | -- | 0.24 | -- | 0.6 | 3.2 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NMOG | 0.0020 | -- | 1.03 | -- | 0.009 | -- | 0.011 | 999.999 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NMOG+NOX | 0.0260 | -- | 1.03 | -- | -- | -- | 0.04 | 0.07 | Pass |
| Fed | 150,000 miles | Federal Tier 3 Bin 70 | NOX | 0.0240 | -- | -- | -- | 0.007 | -- | 0.031 | 999.999 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | CO | 0.35 | -- | -- | -- | 0.24 | -- | 0.6 | 3.2 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | NMOG | 0.0020 | -- | 1.03 | -- | 0.0098 | -- | 0.012 | 999.999 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | NMOG+NOX | 0.0260 | -- | 1.03 | -- | -- | -- | 0.04 | 0.07 | Pass |
| CA | 150,000 miles | California LEV-IV ULEV70 | NOX | 0.0240 | -- | -- | -- | 0.0070 | -- | 0.031 | 999.999 | Pass |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |

## 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 | VASXJ04.0AEX | Evaporative/Refueling Family | VASXR0160T3B |
|---|---|---|---|

## 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 #** | **MASX10065539** | **Test Procedure** | **23 - 2-day evap** |
| **Exhaust Test # for this Evap Test** | MASX10065521 | **Test Fuel Type** | 49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.) |
| **Test Date** | 04/24/2020 | **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** | 4321 | **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) | 0.26 | -- |

**Manufacturer Test Comments** DBX LDT4 9 speed auto 2021MY New EDV

| 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 | 0.2600 | 0.000 | 0.260 | 0.500 | Pass |
| CA | 150,000 miles | California LEV-III Zero Evap (Option 2) | HC-TOTAL-EQUIV | 0.2600 | 0.000 | 0.260 | 0.500 | Pass |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |

| | | | |
|---|---|---|---|
| **Test #** | **MASX10065541** | **Test Procedure** | **34 - Federal fuel 3-day evap** |
| **Exhaust Test # for this Evap Test** | MASX10065540 | **Test Fuel Type** | 49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.) |
| **Test Date** | 05/14/2020 | **Fuel** | Gasoline |
| **Fuel Batch ID** | HF2603 | **Fuel Calibration Number** | 2538 |
| **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** | 4520 | **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)** | 0.366 | -- |

**Manufacturer Test Comments** DBX LDT4 9 speed auto 2021MY New EDV

| 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 | 0.3660 | 0.000 | 0.366 | 0.500 | Pass |
| CA | 150,000 miles | California LEV-III Zero Evap (Option 2) | HC-TOTAL-EQUIV | 0.3660 | 0.000 | 0.366 | 0.500 | Pass |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |

| | | | |
|---|---|---|---|
| **Test #** | **MASX10065519** | **Test Procedure** | **24 - Federal fuel refueling test (ORVR)** |
| **Exhaust Test # for this Evap Test** | MASX10065518 | **Test Fuel Type** | 49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.) |
| **Test Date** | 03/26/2020 | **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** | -- | | |
| **Test Start Odometer Reading** | 4164 | **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)** | 0.015 | -- |

**Manufacturer Test Comments** DBX LDT4 9 speed auto 2021MY New EDV

| 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 | 0.02 | 0.006 | 0.0 | 0.2 | Pass |
| CA | 150,000 miles | California LEV-III Zero Evap (Option 2) | HC-TOTAL-EQUIV | 0.02 | 0.006 | 0.0 | 0.2 | Pass |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |

| | | | |
|---|---|---|---|
| **Test #** | **MASX10065542** | **Test Procedure** | **32 - Federal Fuel Running Loss** |
| **Exhaust Test # for this Evap Test** | MASX10065540 | **Test Fuel Type** | 49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.) |
| **Test Date** | 05/14/2020 | **Fuel** | Gasoline |
| **Fuel Batch ID** | HF2603 | **Fuel Calibration Number** | 2538 |
| **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** | 4520 | **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)** | 0.002 | -- |

**Manufacturer Test Comments** DBX LDT4 9 speed auto 2021MY New EDV

| 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 | 0.002 | 0.000 | 0.00 | 0.05 | Pass |
| CA | 150,000 miles | California LEV-III Zero Evap (Option 2) | HC-TOTAL-EQUIV | 0.002 | 0.000 | 0.00 | 0.05 | Pass |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |

| | | | |
|---|---|---|---|
| **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-III Zero Evap (Option 2) | HC-TOTAL-EQUIV | 0.018 | 0 | 0.02 | 0.02 | Pass |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |

| | | | |
|---|---|---|---|
| **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-III Zero Evap (Option 1) | LEAK-DIA | 0.003 | 0 | 0.00 | 0.02 | Pass |

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |

## Fuel Properties

| | | | |
|---|---|---|---|
| **Fuel Batch ID** | **59318** | **Fuel Calibration Number** | **3658** |
| **Test Fuel Type** | 49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.) | **Fuel Batch Calibration Date** | 07/17/2023 |
| **Fuel Batch Calibration Effective Date** | 07/17/2023 | **Fuel Batch Calibration Ineffective Date** | 07/17/2025 |
| **Carbon Weight Fraction NMHC** | -- | **Carbon Weight Fraction HC** | -- |
| **Exhaust Carbon Weight Fraction** | 0.799 | **Fuel Methanol Volume Fraction** | -- |
| **Fuel Density (grams/cubic ft)** | -- | **Fuel Specific Gravity** | 0.753 |
| **Fuel Ethanol Volume Percent (%)** | 9.5 | **Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)** | 17923 |
| **Fuel Net Heat of Combustion (E10) (MJ/kg)** | -- | **Fuel Carbon Mass Fraction (E10)** | -- |
| **Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)** | 0.799 | **Weight Fraction CO2** | -- |

| | | | |
|---|---|---|---|
| **Fuel Batch ID** | **HF2603** | **Fuel Calibration Number** | **2538** |
| **Test Fuel Type** | 49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.) | **Fuel Batch Calibration Date** | 09/25/2019 |
| **Fuel Batch Calibration Effective Date** | 09/25/2019 | **Fuel Batch Calibration Ineffective Date** | 09/25/2022 |
| **Carbon Weight Fraction NMHC** | -- | **Carbon Weight Fraction HC** | -- |
| **Exhaust Carbon Weight Fraction** | 0.823 | **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)** | 17308 |
| **Fuel Net Heat of Combustion (E10) (MJ/kg)** | -- | **Fuel Carbon Mass Fraction (E10)** | -- |
| **Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)** | 0.823 | **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 |
| **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** | -- |

| | | | |
|---|---|---|---|
| **Fuel Batch ID** | **43987** | **Fuel Calibration Number** | **8394** |
| **Test Fuel Type** | 49 - Tier 3 E10 Premium Gasoline (9 RVP @Low Alt.) | **Fuel Batch Calibration Date** | 01/17/2022 |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |
| **Fuel Batch Calibration Effective Date** | 01/17/2022 | **Fuel Batch Calibration Ineffective Date** | 01/17/2024 |
| **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** | -- |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |

## Consolidated List of Standards

### Exhaust Standards

| | | | |
|---|---|---|---|
| **Cert Region** | Federal | **Cert/In-Use Code** | Cert |
| **Vehicle Class** | LDV/Passenger Car | **Standard Level** | Federal Tier 3 Bin 70 |
| **Fuel** | Gasoline | **Test Procedure** | 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 | -- | -- | -- | -- | -- | -- | 0.24 | 9.6 |
| 150,000 miles | NMOG | -- | -- | 1.03 | -- | -- | -- | 0.009 | 999.999 |
| 150,000 miles | NMOG+NOX | -- | -- | 1.03 | -- | -- | -- | 0.0168 | 0.084 |
| 150,000 miles | NOX | -- | -- | -- | -- | -- | -- | 0.007 | 999.999 |
| 150,000 miles | PM | -- | -- | -- | -- | -- | -- | 0 | 0.006 |

| | | | |
|---|---|---|---|
| **Cert Region** | California + CAA Section 177 states | **Cert/In-Use Code** | Cert |
| **Vehicle Class** | LDV/Passenger Car | **Standard Level** | California LEV-IV ULEV70 |
| **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 | 1.7 |
| 50,000 miles | HCHO | -- | -- | -- | -- | -- | -- | 0 | 0.016 |
| 50,000 miles | NMOG | -- | -- | -- | -- | -- | -- | 0 | 999.999 |
| 50,000 miles | NMOG+NOX | -- | 1 | 1.10 | -- | -- | -- | 0 | 0.14 |
| 50,000 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 ULEV70 |
| **Fuel** | Gasoline | **Test Procedure** | SC03 |

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 150,000 miles | CO | -- | -- | -- | -- | -- | -- | 0.24 | 3.2 |
| 150,000 miles | NMOG | -- | -- | 1.03 | -- | -- | -- | 0.0098 | 999.999 |
| 150,000 miles | NMOG+NOX | -- | -- | 1.03 | -- | -- | -- | 0.01680 | 0.07 |
| 150,000 miles | NOX | -- | -- | -- | -- | -- | -- | 0.0070 | 999.999 |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |

| | | | |
|---|---|---|---|
| **Cert Region** | Federal | **Cert/In-Use Code** | Cert |
| **Vehicle Class** | LDV/Passenger Car | **Standard Level** | Federal Tier 3 Bin 70 |
| **Fuel** | Gasoline | **Test Procedure** | HWFE |

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 150,000 miles | CREE | -- | -- | -- | -- | -- | -- | 0.00 | 999.999 |
| 150,000 miles | NMOG | -- | -- | 1.10 | -- | -- | -- | 0.0098 | 999.999 |
| 150,000 miles | NMOG+NOX | -- | -- | 1.10 | -- | -- | -- | 0.0168 | 0.070 |
| 150,000 miles | NOX | -- | -- | -- | -- | -- | -- | 0.007 | 999.999 |

| | | | |
|---|---|---|---|
| **Cert Region** | California + CAA Section 177 states | **Cert/In-Use Code** | Cert |
| **Vehicle Class** | LDV/Passenger Car | **Standard Level** | California LEV-IV ULEV70 |
| **Fuel** | Gasoline | **Test Procedure** | HWFE |

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 150,000 miles | CREE | -- | -- | -- | -- | -- | -- | 0.00 | 999.999 |
| 150,000 miles | NMOG | -- | -- | 1.10 | -- | -- | -- | 0.0098 | 999.999 |
| 150,000 miles | NMOG+NOX | -- | -- | 1.10 | -- | -- | -- | 0.0168 | 0.070 |
| 150,000 miles | NOX | -- | -- | -- | -- | -- | -- | 0.007 | 999.999 |

| | | | |
|---|---|---|---|
| **Cert Region** | Federal | **Cert/In-Use Code** | Cert |
| **Vehicle Class** | LDV/Passenger Car | **Standard Level** | Federal Tier 3 Bin 70 |
| **Fuel** | Gasoline | **Test Procedure** | SC03 |

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 150,000 miles | CO | -- | -- | -- | -- | -- | -- | 0.24 | 3.2 |
| 150,000 miles | NMOG | -- | -- | 1.03 | -- | -- | -- | 0.009 | 999.999 |
| 150,000 miles | NMOG+NOX | -- | -- | 1.03 | -- | -- | -- | 0.016 | 0.07 |
| 150,000 miles | NOX | -- | -- | -- | -- | -- | -- | 0.007 | 999.999 |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |
| **Cert Region** | Federal | **Cert/In-Use Code** | Cert |
| **Vehicle Class** | LDV/Passenger Car | **Standard Level** | Federal Tier 3 Bin 70 |
| **Fuel** | Gasoline | **Test Procedure** | Federal fuel 2-day exhaust (w/can load) |

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 150,000 miles | CO | -- | -- | -- | -- | -- | -- | 0.24 | 1.7 |
| 150,000 miles | CO-COMP | -- | -- | -- | -- | -- | -- | 0 | 4.2 |
| 150,000 miles | CREE | -- | -- | -- | -- | -- | -- | 0.000 | 999.999 |
| 150,000 miles | HCHO | -- | -- | -- | -- | -- | -- | 0.0003 | 0.004 |
| 150,000 miles | METHANE | -- | -- | -- | -- | -- | -- | 0.000 | 0.03 |
| 150,000 miles | N2O | -- | -- | -- | -- | -- | -- | 0.007 | 0.01 |
| 150,000 miles | NMOG | -- | 1 | 1.10 | -- | -- | -- | 0.0098 | 999.999 |
| 150,000 miles | NMOG+NOX | -- | -- | 1.10 | -- | -- | -- | 0.0168 | 0.070 |
| 150,000 miles | NMOG+NOX-COMP | -- | -- | 1.10 | -- | -- | -- | 0 | 0.050 |
| 150,000 miles | NOX | -- | -- | -- | -- | -- | -- | 0.007 | 999.999 |
| 150,000 miles | PM | -- | -- | -- | -- | -- | -- | 0 | 0.003 |

| | | | |
|---|---|---|---|
| **Cert Region** | California + CAA Section 177 states | **Cert/In-Use Code** | Cert |
| **Vehicle Class** | LDV/Passenger Car | **Standard Level** | California LEV-IV ULEV70 |
| **Fuel** | Gasoline | **Test Procedure** | US06 |

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 150,000 miles | CO | -- | -- | -- | -- | -- | -- | 0.24 | 9.6 |
| 150,000 miles | NMOG | -- | -- | 1.03 | -- | -- | -- | 0.0098 | 999.999 |
| 150,000 miles | NMOG+NOX | -- | -- | 1.03 | -- | -- | -- | 0.01680 | 0.084 |
| 150,000 miles | NOX | -- | -- | -- | -- | -- | -- | 0.0070 | 999.999 |
| 150,000 miles | PM | -- | -- | -- | -- | -- | -- | 0 | 0.006 |

# Certification Summary Information Report

**Test Group** VASXJ04.0AEX **Evaporative/Refueling Family** VASXR0160T3B

**Cert Region** California + CAA Section 177 states **Cert/In-Use Code** Cert
**Vehicle Class** LDV/Passenger Car **Standard Level** California LEV-IV ULEV70
**Fuel** Gasoline **Test Procedure** Cold CO

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 50,000 miles | CO | -- | -- | -- | -- | -- | -- | 0 | 10 |
| 50,000 miles | HC-NM | -- | -- | -- | -- | -- | -- | 0.000 | 0.3 |

**Cert Region** California + CAA Section 177 states **Cert/In-Use Code** Cert
**Vehicle Class** LDV/Passenger Car **Standard Level** California LEV-IV ULEV70
**Fuel** Gasoline **Test Procedure** Federal fuel 2-day exhaust (w/can load)

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 150,000 miles | CO | -- | -- | -- | -- | -- | -- | 0.24 | 1.7 |
| 150,000 miles | CREE | -- | -- | -- | -- | -- | -- | 0.000 | 999.999 |
| 150,000 miles | HCHO | -- | -- | -- | -- | -- | -- | 0.0003 | 0.004 |
| 150,000 miles | METHANE | -- | -- | -- | -- | -- | -- | 0.000 | 0.03 |
| 150,000 miles | N2O | -- | -- | -- | -- | -- | -- | 0.007 | 0.01 |
| 150,000 miles | NMOG | -- | 1 | 1.10 | -- | -- | -- | 0.0098 | 999.999 |
| 150,000 miles | NMOG+NOX | -- | -- | 1.10 | -- | -- | -- | 0.0168 | 0.070 |
| 150,000 miles | NOX | -- | -- | -- | -- | -- | -- | 0.007 | 999.999 |
| 150,000 miles | PM | -- | -- | -- | -- | -- | -- | 0 | 0.003 |

**Cert Region** Federal **Cert/In-Use Code** Cert
**Vehicle Class** LDV/Passenger Car **Standard Level** Federal Tier 3 Bin 70
**Fuel** Gasoline **Test Procedure** Cold CO

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 50,000 miles | CO | -- | -- | -- | -- | -- | -- | 0 | 10 |
| 50,000 miles | HC-NM | -- | -- | -- | -- | -- | -- | 0.000 | 0.3 |

## Evaporative/Refueling Standards

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |

| | | | |
|---|---|---|---|
| **Evaporative/Refueling Family** | VASXR0160T3B | **Cert Region** | Federal |
| **Cert/In-Use Code** | Cert | **Standard Level** | Federal Tier 3 Evap |
| **Test Procedure** | 2-day evap | | |

| Fuel | Useful Life | Emission Name | Rounded Result | Std | Add DF |
|---|---|---|---|---|---|
| Gasoline | 150,000 miles | HC-TOTAL-EQUIV | -- | 0.500 | 0.000 |

| | | | |
|---|---|---|---|
| **Evaporative/Refueling Family** | VASXR0160T3B | **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** | VASXR0160T3B | **Cert Region** | California + CAA Section 177 states |
| **Cert/In-Use Code** | Cert | **Standard Level** | California LEV-III Zero Evap (Option 2) |
| **Test Procedure** | 2-day evap | | |

| Fuel | Useful Life | Emission Name | Rounded Result | Std | Add DF |
|---|---|---|---|---|---|
| Gasoline | 150,000 miles | HC-TOTAL-EQUIV | -- | 0.500 | 0.000 |

| | | | |
|---|---|---|---|
| **Evaporative/Refueling Family** | VASXR0160T3B | **Cert Region** | California + CAA Section 177 states |
| **Cert/In-Use Code** | Cert | **Standard Level** | California LEV-III Zero Evap (Option 2) |
| **Test Procedure** | Federal fuel 3-day evap | | |

| Fuel | Useful Life | Emission Name | Rounded Result | Std | Add DF |
|---|---|---|---|---|---|
| Gasoline | 150,000 miles | HC-TOTAL-EQUIV | -- | 0.500 | 0.000 |

| | | | |
|---|---|---|---|
| **Evaporative/Refueling Family** | VASXR0160T3B | **Cert Region** | California + CAA Section 177 states |
| **Cert/In-Use Code** | Cert | **Standard Level** | California LEV-III Zero Evap (Option 2) |
| **Test Procedure** | Evap Canister Bleed Test | | |

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

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |

| | | | |
|---|---|---|---|
| **Evaporative/Refueling Family** | VASXR0160T3B | **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 | 0.000 |

| | | | |
|---|---|---|---|
| **Evaporative/Refueling Family** | VASXR0160T3B | **Cert Region** | California + CAA Section 177 states |
| **Cert/In-Use Code** | Cert | **Standard Level** | California LEV-III Zero Evap (Option 1) |
| **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** | VASXR0160T3B | **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** | VASXR0160T3B | **Cert Region** | California + CAA Section 177 states |
| **Cert/In-Use Code** | Cert | **Standard Level** | California LEV-III Zero Evap (Option 2) |
| **Test Procedure** | Federal fuel refueling test (ORVR) | | |

| Fuel | Useful Life | Emission Name | Rounded Result | Std | Add DF |
|---|---|---|---|---|---|
| Gasoline | 150,000 miles | HC-TOTAL-EQUIV | -- | 0.2 | 0.006 |

| | | | |
|---|---|---|---|
| **Evaporative/Refueling Family** | VASXR0160T3B | **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-EQUIV | -- | 0.500 | 0.000 |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |

| | | | |
|---|---|---|---|
| **Evaporative/Refueling Family** | VASXR0160T3B | **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 | 0.006 |

| | | | |
|---|---|---|---|
| **Evaporative/Refueling Family** | VASXR0160T3B | **Cert Region** | California + CAA Section 177 states |
| **Cert/In-Use Code** | Cert | **Standard Level** | California LEV-III Zero Evap (Option 2) |
| **Test Procedure** | Federal Fuel Running Loss | | |

| Fuel | Useful Life | Emission Name | Rounded Result | Std | Add DF |
|---|---|---|---|---|---|
| Gasoline | 150,000 miles | HC-TOTAL-EQUIV | -- | 0.05 | 0.000 |

# Certification Summary Information Report

| Test Group | VASXJ04.0AEX | Evaporative/Refueling Family | VASXR0160T3B |
|---|---|---|---|

## 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** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |
|---|---|---|---|
| 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** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |
|---|---|---|---|
| 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** | VASXJ04.0AEX | **Evaporative/Refueling Family** | VASXR0160T3B |
|---|---|---|---|
| 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 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 accordance with the flexibility in 40CFR 86.1829-15(e)(6,) we state as 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. Additionally tests for 2024MY included HCHO analysis and show full compliance with the regulatory criteria pollutant requirements.
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

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.

## 11. AECD Descriptions

The Aston Martin Lagonda Ltd Test Group – VASXJ04.0AEX uses a Bosch MED 17.7.5 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) | 572 - DB12 V8<br>547 - DB12 S<br>614 - Vantage<br>840 - DBX |
| 12.1.2. | Vehicle Classification | LDV & LDT |
| 12.1.3. | Emission Control System Description: | |
| 12.1.3.1. | Catalyst | |
| | Type: | Three-Way Catalyst |
| | Number: | EPA assigned additive deterioration |
| | Configuration: | 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 | Not Applicable |
| 12.1.3.4. | Fuel system type | Electronic Direct 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 | 177850 (DB12 and Vantage), 177950 (DBX) |
| 12.1.5. | Number of valves per cylinder | 4 |
| 12.1.6. | Engine Displacement | 3982cm³ (243 in.³) |

| | | |
|---|---|---|
| 12.1.7. | Sales area | FA & CA |
| 12.1.8. | Transmission and overdrive | A8 - DB12 & Vantage<br>A9 - DBX |
| 12.1.9. | Shift indicator light | Equipped, not shifted by SIL |
| 12.1.10. | Tire Size | DB12/Vantage - 275/35R21(F),<br>Michelin Pilot Sport 5<br>DBX - 285/40R22(F), 325/35R22(R) or<br>285/35R23(F), 325/30R23(R)<br>Pirelli Scorpion Zero All Season AS8 |
| 12.1.11. | N/V Ratio | 24.8 DB12 & Vantage 8 speed auto<br>21.8 DBX 9 speed auto |
| 12.1.12. | Equivalent test weight | 4500lbs DB12 models<br>5500lbs DBX models<br>4250lbs Vantage models |
| 12.1.13. | Fuel tank volume | 19.4 US Gallons - Vantage<br>20.6 US Gallons - DB12<br>21.9 US Gallons - DBX |

**12.2. Test Parameters**

12.2.1 Engine Start/Stop Procedures

**All Transmission types:**
*Ensure the key fob is present in the vehicle. Check that the parking brake is applied. 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. Alternatively press and hold the start button for a quiet start.*

*To stop the engine, select P and push the start button. 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:

DB12 & Vantage 8 speed auto Config 00 - program auto shift schedule
All DBX 9 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 |
| DB12 V8 | 4500 | 325/30R21 | 53.24 | 0.2228 | 0.0221 | 5.67 | 0.0083 | 0.0221 |
| Vantage | 4250 | 325/30R21 | 52.07 | 0.2623 | 0.0224 | -13.38 | 0.2616 | 0.0201 |
| DBX | 5500 | 325/30R23 | 69.33 | 0.0192 | 0.0331 | -14.97 | -0.34 | 0.0336 |
| DB12 S | 4500 | 325/30R21 | 59.35 | 0.1784 | 0.0239 | 7.46 | 0.0564 | 0.0211 |

12.2.4. Evaporative / Refuelling Families VASXR0160T3A & VASXR0160T3B

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 assure 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 § 86.1848–01 and -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.

**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 VASXJ04.0AEX

Aston Martin Lagonda Ltd herewith also applies for a California ARB Executive Order for Test Group VASXJ04.0AEX

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
Head of Legislation & Certification

## 15. Other Information

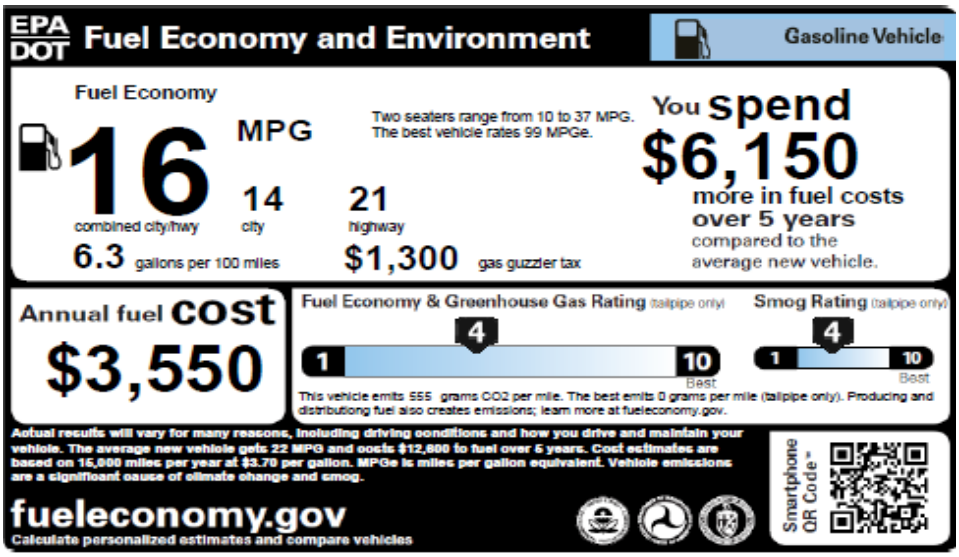
15.1. Label samples according to 40 CFR § 86.1807-01 and according to California Motor Vehicle Emission Control Label Specifications. Positioned under the hood.

| ASTON MARTIN LAGONDA LTD<br>VEHICLE EMISSION CONTROL INFORMATION | | | |
|---|---|---|---|
| Conforms to regulations: | MY 2027 | | |
| US EPA: | Tier 3 BIN70 LDV | OBD II | Fuel: T3 Premium |
| California: LEV4 ULEV70 PC | | OBD II | Fuel: T3 Premium |
| GROUP: VASXJ04.0AEX<br>EVAP: VASXR0160T3A | | 2WU-TWC/2TWC/2WR-HO2S/<br>2HO2S/2TC/2CAC/DFI | |
| No Adjustments Needed | | | VY63-973268-AA |

| ASTON MARTIN LAGONDA LTD<br>VEHICLE EMISSION CONTROL INFORMATION | | | |
|---|---|---|---|
| Conforms to regulations: | MY 2027 | | |
| US EPA: | Tier 3 BIN70 LDT | OBD II | Fuel: T3 Premium |
| California: LEV4 ULEV70 LDT | | OBD II | Fuel: T3 Premium |
| GROUP: VASXJ04.0AEX<br>EVAP: VASXR0160T3B | | 2WU-TWC/2TWC/2WR-HO2S/<br>2HO2S/2TC/2CAC/DFI | |
| No Adjustments Needed | | | VY83-973268-AA |

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)



## 15.3. Fee Filling Form - EPA Condensed version

### US EPA Fee Form

Help and EPA Instructions

* Required Field

**General Information**

**Date:** 02/23/2026

Process Code *
Submit New Fee Filing Form

Manufacturer Code *
ASX

Manufacturer Name *
Aston Martin Lagonda Ltd

Contact Name *
Martin Haggett

Contact Email Address *
martin.haggett@astonmartin.com

Contact Phone *
011447484676255

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.**

Engine Family / Evaporative Family / Test Group *
VASXJ04.0AEX

**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**

Amount Owed
$32,317.00

Payment Type *
Online ACH

Comments

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** | MSF250859 |
| **Invoice Date** | Feb 23, 2026 |

**COMPANY INFORMATION**

| | |
|---|---|
| **Company Name** | Aston Martin Lagonda Ltd |
| **Address** | Banbury Road |
| **City** | Gaydon |
| **State** | Warwickshire |
| **Zip** | CV35 0DB |
| **Country** | United Kingdom |
| **Contact Name** | Martin Haggett |
| **Contact Telephone Number** | 011447484676255 |
| **Contact Email** | martin.haggett@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_VASXJ04.0AEX_APPIPT | Model Year 2027 | VASXJ04.0AEX | 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 routinely performs altitude testing on each test group EDV to provide surety of this requirement.

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.

17.1.12. 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 - applicable to all DB12, Vantage & DBX vehicles within each family

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 $\alpha$ in degrees | -10° ≤$\alpha$≤ 20° | 1° |
| (2) Spill prevention in degrees (angle between centerline of test spout in its resting position and the horizontal plane) | 30° (min) | 68.8° (44°) |
| (3) Test nozzle penetration of Restrictor | 22.5 mm (min) | 30.85 |
| (4) Angle $\beta$ 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) | 5.4 cm |
| | 52.0 mm (min) | 5.3 |
| (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 Leak Test ***(SVM from 2024MY)*** | 2.5L/min (Max) at 500Pa Vacuum | 0.7 max |
| (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) | | *ASXR0160T3A & *ASXR0160T3B |
| (16) Total vehicle model year sales | | xx |

* 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 & VASXR0160T3B

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) | DB12 & DB12 S Coupe<br>DB12 & DB12 S Volante<br>DBX S & DBX GT<br>Vantage & Vantage S Hatch<br>Vantage & Vantage S Roadster |
| Test Group | VASXJ04.0AEX |
| Evaporative Family | VASXR0160T3A & VASXR0160T3B |
| Engine Type | V8 Gasoline |
| Liters (CID) | 4.0 (243 in.³). |
| Drive System (DB12 and Vantage) | Front engine, rear wheel drive |
| Drive System (DBX) | Front engine, all 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 | On-Board Diagnostics II, 2 turbochargers, 2 charge air coolers |

17.5.2.4. Fuel System

| | |
|---|---|
| DFI | Direct 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:** | VASXJ04.0AEX | **Evaporative Family:** | VASXR0160T3A & VASXR0160T3B |
|---|---|---|---|---|---|

**All Eng. Codes in test group** CA X 49S 50S X AB965 ORVR Yes X No

**Veh class (DB12 & Vantage)** PC X LDT1 LDT2 LDT3 LDT4 MDV MDPV

**Veh class (DBX)** PC LDT1 LDT2 LDT3 LDT4 X MDV MDPV

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

**Fuel Type(s):** Dedicated X 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)
Diesel: 13 CCR 2282 40 CFR 86.113-90 40 CFR 86.113-94 Tier 3 E10 Premium

**Evaporative Test Procedure:** California Federal X

**Service Accum:** Std. AMA AMA Mfr ADP X Other (Specify

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

**Engine Configuration:** V8 Displacement 4.0 Liters 243 Cubic Inches

**Valves per Cylinder:** 4 Rated HP

| | | | |
|---|---|---|---|
| 665 | @ | 6000 rpm | Vantage |
| 680 | @ | 6000 rpm | DB12 & Vantage S |
| 700 | @ | 6000 rpm | DB12 S |
| 727 | @ | 6000 rpm | DBX |

**Engine:** Front X Mid Rear **Drive (DBX):** FWD RWD 4WD-FT X 4WD-PT

**Drive (DB12 & Vantage):** FWD RWD X 4WD-FT 4WD-PT

**Exhaust ECS:** 2WU-TWC/2TWC/2WR-HO2S/2HO2S/2TC/2CAC/DFI

| Engine Code | Vehicle Model | Trans Type | ETW (lbs.) | ECM CAL ID | TCM CAL ID | Catalytic Converter Part #'s |
|---|---|---|---|---|---|---|
| 177850 (AE23) | DB12 Coupe<br>DB12 S Coupe | A8 | 4500 | 5A260B#<br>5A265F# | #Y53-7J105-A# | #Y53-5E215-A# LH assembly<br>#Y53-5E214-A# RH assembly |
| 177850 (AE23) | DB12 Volante<br>DB12 S Volante | A8 | 4500 | 5A260B#<br>5A265F# | #Y53-7J105-A# | #Y53-5E215-A# LH assembly<br>#Y53-5E214-A# RH assembly |
| 177950 (AE24) | DBX | A9 | 5500 | 8A260O# | OE3100144900 | LH: #Y83-5G232-A# Warm up<br>RH: #Y83-5G236-A# Warm up<br>#Y83-5E215-A# LH underfloor<br>#Y83-5E214-A# RH underfloor |
| 177850 (AE23) | Vantage<br>Vantage S | A8 | 4250 | 6A265B#<br>6A265J# | #Y53-7J105-A# | #Y53-5E215-A# LH assembly<br>#Y53-5E214-A# RH assembly |
| 177850 (AE23) | Vantage Roadster<br>Vantage S Roadster | A8 | 4250 | 6A265B#<br>6A265J# | #Y53-7J105-A# | #Y53-5E215-A# LH assembly<br>#Y53-5E214-A# RH assembly |

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:** VASXJ04.0AEX **Family:** VASXR0160T3A & VASXR0160T3B

**All Eng. Codes in Test Group:** CA X 49S 50S X AB965 **ORVR:** Yes X No

**Exhaust Std:** LEV ULEV X PZEV V US EPA T3 Equiv

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

**Vantage)** PC X LDT1 LDT2 LDT3 LDT4 MDV MDPV

**Veh class (DBX)** PC LDT1 LDT2 LDT3 LDT4 X MDV MDPV

**Single Cert. Std. for Multi-Class Test:** Y

**Fuel Type(s):** Dedicated 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 X AMA Mfr ADP Other (Specify

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

**Engine Configuration:** V8 Displacement 4.0 Liters 243 Cubic Inches

**Valves per Cylinder:** 4 Rated HP 665 @ 6000 rpm Vantage

680 @ 6000 rpm DB12 & Vantage S

700 @ 6000 rpm DB12 S

727 @ 6000 rpm DBX

**Engine:** Front X Mid Rear **Drive (DBX):** FWD RWD 4WD-FT X 4WD-PT

**Drive (DB12 & Vantage):** FWD RWD X 4WD-FT 4WD-PT

**Exhaust ECS:** 2WU-TWC/2TWC/2WR-HO2S/2HO2S/2TC/2CAC/DFI

| | | 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 |

| 21 Test Vehicle Information | Durability Data | Emission Data Vehicle | Evap Emission Data | FEDV |
|---|---|---|---|---|
| C/O or C/A | C/O | | | ----- |
| MY & ID | N/A | 2024, 5723PT5601 | 2022, 564TT5477<br>2021, 8001PT8342 | 2024, 5723PT5601<br>2023, 8841PT8473<br>2025, 6122PT6433<br>2026, 840TT8650<br>2026, 547TT5632 |
| Vehicle Log Page(s) | | | | ----- |
| Zero Mile Book Page(s) | ----- | ----- | ----- | ----- |

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: VASXJ04.0AEX
Evaporative Families: VASXR0160T3A & VASXR0160T3B

| Emission Data Vehicle ID | Engine Code & Displ. | Test Location | Trans | ETW (lbs) | DPA (hp) | MPG | |
|---|---|---|---|---|---|---|---|
| | | | | | | City | Hwy |
| 5723PT5601 | 177850 3982cc | Manufacturer | A8 | 4500 | N/A | 18.3 | 31.3 |

## PROJECTED EMISSIONS (1) (2)

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

| **Test Fuel:** EPA T3 E10 Prem<br>**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 | | | | | 1.10 | | 485/283 | - | - | - | - |
| | 150k | 0.0454 | 0.74 | 0.016 | 1 | | 0.0242 | | 0.247 | N/A | 0.001 | 0.112 |

| | The Emissions Data vehicle(s) above comply with standards as follows: | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) | at 50k of | | | | | 10 | | | | | | |
| | at 150k of | 0.070 | 1.7 | - | 4 | | 0.07 | | 0.30 | 0.30 | 0.05 | 0.20 |
| | and include additive DFs: | | | | | | | | | | | |
| | at 150k of | 0.0168 | 0.24 | 0.007 | - | N/A | 0.0168 | | | | | |
| (2) | Evaporative 150k DFs of | | | | | | | | 0.0021 | 0.00 | 0.00 | 0.0060 |

## SFTP TEST RESULTS

(grams/mile)

| Mileage | | Measurable | | Emissions Cert Level | | Emissions Standard |
|---|---|---|---|---|---|---|
| 150k | | US06 -NMOG+NOx | | 0.038 | | 0.084 |
| 150k | | US06 - CO | | 0.38 | | 9.6 |
| 150k | | SC03 - NMOG+NOx | | 0.043 | | 0.07 |
| 150k | | SC03 - CO | | 0.59 | | 1.7 |
| 4k | | $CO_2$ - US06 | | 409.87 | | |
| 4k | | $CO_2$ - SC03 | | 488.62 | | |
| | | | | | | |

* 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) | | 0.62 | 0.0461 | 0.0002 | Exempted |
| **ULEV 50° F standards** | | 1.70 | 0.140 | 0.016 | Exempted |

The NMOG values include Reactivity Adjustment Factor(s) (RAF) of N/A _____ NMOG ___1____ CNG/LNG __N/A__

Remarks: _____

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

17.6. Vehicle Weights

17.6.1 Curb Weight

4074 lbs DB12 EDV
5141 lbs DBX FEDV
3933 lbs Vantage FEDV

17.6.2 Equivalent test weight

4500 lbs at Loaded Vehicle Weight - DB12
4250 lbs at Loaded Vehicle Weight Vantage
5500 lbs at Loaded Vehicle Weight - DBX

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

Applicable Standards: 50 state - EPA T3 Bin70,
CARB LEV4 ULEV 70

| | 4k | 50k | 150k | |
|---|---|---|---|---|
| FTP NMOG+NOx | | | 0.07 | g/mi. |
| CO | | | 1.7 | g/mi. |
| HCHO | | | 4 | mg/mi. |
| HFET NMOG+NOx | | | 0.07 | g/mi. |
| Cold CO | | 10 (12.5 LDT) | | g/mi. |
| Cold NMHC Fleet | | | 0.3 | g/mi. |
| | | | 150k | |
| Evap 3d | - | | 0.3 (0.5 LDT) | g/test |
| Supplem. 2d | - | | 0.3 (0.5 LDT) | g/test |
| Running Loss | - | | 0.05 | g/mi. |
| ORVR | - | | 0.2 | g/gal |
| | | | | |
| 50F - NMOG+NOx | | 0.14 | | g/mi. |
| 50F - CO | | 1.7 | | g/mi. |
| 50F - HCHO | | 16 | | mg/mi. |
| | | | | |
| US06 NMOG+NOx | | - | 0.084 | g/mi. |
| US06 CO | | - | 9.6 | g/mi. |
| SC03 NMOG+NOx | | - | 0.07 | g/mi. |
| SC03 CO | | - | 1.7 | 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 |