Certification Summary Information Report

Manufacturer	Aston Martin Lagonda	**Manufacturer Code**	ASX
Test Group	VASXJ04.0AEX	**Evaporative/Refueling Family**	VASXR0160T3B
Certificate Number	VASXJ04.0AEX-003	**CARB Executive Order #**	--
Certificate Issue Date	06/25/2026	**Certificate Revision Date**	--
Certificate Effective Date	06/25/2026	**Conditional Certificate**	No
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	09/01/2026	**CAP2000 Conditional Certificate?**	No
Independent Commercial Importer?	No	**Alternative Fuel Converter Certificate?**	No
SFTP Federal Composite Compliance Identifier	Tier 3	**SFTP Tier 2 Composite CO Option**	--
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	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	0.5	--	--	--	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	--	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	--	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	1.1	--	0.0098	--	0.029	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.0285	--	1.1	--	--	--	0.045	0.070	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX-COMP	0.0418	--	1.1	--	0	--	0.042	0.050	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.009	--	--	--	0.007	--	0.016	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	PM	0.001	--	--	--	0	--	0.001	0.003	Pass
CA	150,000 miles	California LEV-IV ULEV70	CO	0.5	--	--	--	0.24	--	0.7	1.7	Pass
CA	150,000 miles	California LEV-IV ULEV70	CREE	999	--	--	--	0	--	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	--	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	1.1	--	0.0098	--	0.029	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG+NOX	0.0285	--	1.1	--	--	--	0.045	0.070	Pass
CA	150,000 miles	California LEV-IV ULEV70	NOX	0.009	--	--	--	0.007	--	0.016	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	PM	0.001	--	--	--	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	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	1.1	--	--	--	0.05	0.14	Pass
CA	50,000 miles	California LEV-IV ULEV70	NOX	0.014	--	--	--	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	0.1	--	--	--	0	--	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	0.1	--	--	--	0	--	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/NMHC 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	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG	0.0004	--	1.1	--	0.0098	--	0.01	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.0074	--	1.1	--	--	--	0.024	0.070	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.007	--	--	--	0.007	--	0.014	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	CREE	999	--	--	--	0	--	999	--	--
CA	150,000 miles	California LEV-IV ULEV70	NMOG	0.0004	--	1.1	--	0.0098	--	0.01	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG+NOX	0.0074	--	1.1	--	--	--	0.024	0.070	Pass
CA	150,000 miles	California LEV-IV ULEV70	NOX	0.007	--	--	--	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	0.001	--	1.03	--	0.009	--	0.01	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.021	--	1.03	--	--	--	0.037	0.084	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.02	--	--	--	0.007	--	0.027	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	PM	0.005	--	--	--	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	0.001	--	1.03	--	0.0098	--	0.011	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG+NOX	0.021	--	1.03	--	--	--	0.038	0.084	Pass
CA	150,000 miles	California LEV-IV ULEV70	NOX	0.02	--	--	--	0.007	--	0.027	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	PM	0.005	--	--	--	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	0.002	--	1.03	--	0.009	--	0.011	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NMOG+NOX	0.026	--	1.03	--	--	--	0.04	0.07	Pass
Fed	150,000 miles	Federal Tier 3 Bin 70	NOX	0.024	--	--	--	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	0.002	--	1.03	--	0.0098	--	0.012	999.999	Pass
CA	150,000 miles	California LEV-IV ULEV70	NMOG+NOX	0.026	--	1.03	--	--	--	0.04	0.07	Pass
CA	150,000 miles	California LEV-IV ULEV70	NOX	0.024	--	--	--	0.007	--	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	0.26	0	0.26	0.5	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.26	0	0.26	0.5	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	0.366	0	0.366	0.5	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.366	0	0.366	0.5	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	0.2	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.02	0.006	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	0	0.05	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.002	0	0	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	0.02	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 1)	LEAK-DIA	0.003	0	0	0.02	Pass

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

Fuel Properties

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	**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	**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

Certification Summary Information Report

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

Certification Summary Information Report

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

Consolidated List of Standards

Exhaust Standards

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	999.999
150,000 miles	NMOG	--	--	1.1	--	--	--	0.0098	999.999
150,000 miles	NMOG+NOX	--	--	1.1	--	--	--	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**	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	999.999
150,000 miles	HCHO	--	--	--	--	--	--	0.0003	0.004
150,000 miles	METHANE	--	--	--	--	--	--	0	0.03
150,000 miles	N2O	--	--	--	--	--	--	0.007	0.01
150,000 miles	NMOG	--	1	1.1	--	--	--	0.0098	999.999
150,000 miles	NMOG+NOX	--	--	1.1	--	--	--	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	0.3

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	999.999
150,000 miles	HCHO	--	--	--	--	--	--	0.0003	0.004
150,000 miles	METHANE	--	--	--	--	--	--	0	0.03
150,000 miles	N2O	--	--	--	--	--	--	0.007	0.01
150,000 miles	NMOG	--	1	1.1	--	--	--	0.0098	999.999
150,000 miles	NMOG+NOX	--	--	1.1	--	--	--	0.0168	0.070
150,000 miles	NMOG+NOX-COMP	--	--	1.1	--	--	--	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	--	--	--	0.0168	0.084
150,000 miles	NOX	--	--	--	--	--	--	0.007	999.999
150,000 miles	PM	--	--	--	--	--	--	0	0.006

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** 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

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	1.1	--	--	--	0	0.14
50,000 miles	NOX	--	--	--	--	--	--	0	999.999

Cert Region Federal **Cert/In-Use Code** Cert
Vehicle Class LDV/Passenger Car **Standard Level** Federal Tier 3 Bin 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

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	999.999
150,000 miles	NMOG	--	--	1.1	--	--	--	0.0098	999.999
150,000 miles	NMOG+NOX	--	--	1.1	--	--	--	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** 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	--	--	--	0.0168	0.07
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** 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	0.3

Evaporative/Refueling Standards

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

Certification Summary Information Report

Test Group	VASXJ04.0AEX	Evaporative/Refueling Family	VASXR0160T3B

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

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 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 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 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

Certification Summary Information Report

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

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

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

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 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**	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

Certification Summary Information Report

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

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