Application for Certification

Model Year: 2027
Manufacturer Name: BMW

Test Group: VBMXV02.0B4P
Test Group Description: in-line 4-cylinder, 4-stroke, 2.0 Liter, gasoline

Durability Group: VBMXHHGVNV1P
Durability Group Description: 4-Stroke Otto Cycle
gasoline
direct fuel injection and multiport fuel injection
ceramic, monolith
Palladium, Rhodium
Gasoline Particulate Filter, Three-Way Catalyst

Evaporative Group: VBMXR0150G60

Applicable Standards: EPA
FTP Standard: Interim Tier 4 - Bin 20
SFTP Standard: Interim Tier 4 composite - 0.040
EVAP FEL: Tier 3 - 300

Vehicle Classes Covered: EPA
LDV

Carlines Covered: 430i Convertible, 430i Coupe , 430i Gran Coupe, 430i xDrive Convertible, 430i xDrive Coupe , 430i xDrive Gran Coupe

Test EDV:

VID	CFG	Fuel	FTP	HWY	US06	SC03	Cold CO
9T75002	00	T3E10	SBMX10086056	SBMX10086055	SBMX10086057	SBMX10086058	SBMX10086060
9T75002	03	T2E0	SBMX10086054	SBMX10086053	---	---	---

Confirmatory Test EDV:

VID	CFG	Fuel	FTP	HWY	US06	SC03	Cold CO
9T75002	00	T3E10	SBMX91005970	SBMX91005972	SBMX91005971	---	---
9T75002	03	T2E0	---	---	---	---	---

Test EDV EVAP:

Family	VID	CFG	Fuel	3-day	RL	2-day	ORVR	BTP	Leak
R0150G60	9T75018	00	T3E10	SBMX10085519	SBMX10085522	SBMX10085517	SBMX10085523	SBMX10085524	SBMX10085525

For questions, Contact: Carlheinz Bayer, 201 / 571 - 5193

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Table of Changes

Revision / Running Change No.	Date	Section	Description of Change
27-V02.0B4P-01	21.04.2026	---	New models added: 430i Gran Coupe 430i xDrive Gran Coupe
		7	CSI: CH4 and N2O Emission Compliance Check for applicable test procedures removed due to Final Rule: Rescission of the Greenhouse Gas Endangerment Finding and Motor Vehicle Greenhouse Gas Emission Standards Under the Clean Air Act Federal Emission Standard updated to “Tier 3 BIN 20”, which represents the corresponding Interim Tier 4 BIN 20

1. Correspondence and Communications

1.1.	Authorized Persons	Refer to Common Section
1.2.	Certificate Information	Refer to Common Section
1.3.	Primary certification contact:	

Name: Carlheinz Bayer
Phone Number: 201 / 571 - 5193
Fax Number: 201 / 571 - 5479
E-Mail-Address: Carlheinz.Bayer@bmwna.com

2. Durability Group Description

2.1.	Durability Group Name	VBMXHHGVNV1P
2.2.	Combustion Cycle	4-Stroke Otto Cycle
2.3.	Engine type	piston, water cooled
2.4.	Fuel used	gasoline
2.5.	Basic fuel metering system	direct fuel injection and multiport fuel injection
2.6.	Catalyst construction	ceramic monolith
2.7.	Precious Metals in Catalyst	Palladium Rhodium
2.8.	Particulate Filter Construction	ceramic monolith
2.9.	Precious Metals in Particulate Filter	Palladium Rhodium
2.10.	Precious Metal Loading	Refer to Section 16, Confidential Information
2.11.	Range of Catalyst Grouping Statistics	10.9 - 8.2

3. Evaporative / Refueling Family Description

3.1.	Evaporative / Refueling Family Name	VBMXR0150G60
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.	Basic canister design	
	Working capacity:	150 g
	System configuration:	1 canister
	Canister Construction:	active charcoal granulate closed bottom
	Canister Materials:	plastic
3.2.3.	Fuel system	time-contr. DI time-contr. MPI
3.2.4.	Type of refueling emission control system	integrated system
3.2.5.	Fillpipe seal mechanism	liquid seal
3.2.6.	Vapor control system	passive mechanical system with liquid seal
3.2.7.	Purge control system	electric purge valve
3.2.8.	Vapor hose material	multilayer plastic
3.2.9.	Fuel tank material	hdpe
3.3.	Leak Family Description	same Leak-Standard in between the evaporative family

3.4. ORVR Statement

Evaporative Family VBMXR0150G60

ORVR safety application is carried over from previous model year.

This evaporative / refueling family was first certified for model year 2025.

During this time period we had no in-use problems or defects related to the ORVR system that required action by BMW.

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 ORVR system.
Therefore no EPA/NHTSA review of this evaporative / refueling family was required.

4. Durability Procedure Description

4.1. Description of used durability process

4.1.1. Alternative Durability Program for Exhaust Emissions:

The durability data vehicle was aged according to the bench aging process described in §86.1823-08. Following parameters were used to age the catalyst of the durability data vehicle:

	Exhaust branch 1. line	Exhaust branch 2. line
Tref [°C] =	856.4	---
calculated tref [h] =	171.2	---
effective tref [h] =	171.1	---

Statement:

Based on BMW`s good engineering judgment, all the vehicles described in this Application for Certification comply with all applicable intermediate and full useful life standards.

4.1.2. Durability Program for Evaporative/Refueling Emissions:

Confidential Information:
Refer to Common Section

4.2. Determination of certification Levels

4.2.1. Exhaust Emissions:

additive deterioration factor:

For Deterioration Factors refer to Summary Sheet enclosed in Chapter 7 of this application.

4.2.2. Evaporative/Refueling Emissions:

additive deterioration factor:

For Deterioration Factors refer to Summary Sheet enclosed in Chapter 7 of this application.

5. Test Group Description

5.1.	Test Group Name	VBMXV02.0B4P
5.2.	Engine information	
5.2.1.	Engine displacement	1998 cm^3
5.2.2.	Arrangement of cylinders	in line
5.2.3.	Number of cylinders	4
5.3.	Hybrid Electric Vehicle System Description	
5.3.1.	Electric Motor	Refer to Section 12
5.3.2.	Battery	Refer to Section 12
5.4.	Vehicle class	EPA
		LDV
5.5.	Emission standards class	Interim Tier 4 - Bin 20
5.6.	Applicable emission standards	Refer to Summary Sheet enclosed in Section 7 of this application.

6. Test Vehicle Description

6.1. Test Vehicle Description EDV, FEDV, DDV

VID	CFG	Carline	Model	Trans Type	Type	Fuel	ESS	Road Load CFG	Gear	Mode	eDrive	ETW
9T75002	00	--	X3 xDrive30i	SA-8	EDV	T3E10	---	30	refer to section 12	refer to section 12	refer to section 12	4500
CN42010	01	325	430i xDrive Convertible	SA-8	FEDV	T2E0	---	21	D	default mode	---	4500
CN42010	02	325	430i xDrive Convertible	SA-8	FEDV	T2E0	---	22	D	default mode	---	4500
CN42046	00	324	430i Convertible	SA-8	FEDV	T2E0	---	21	D	default mode	---	4250
CN42046	01	324	430i Convertible	SA-8	FEDV	T2E0	---	22	D	default mode	---	4250
CN42046	02	317	430i Coupe	SA-8	FEDV	T2E0	---	21	D	default mode	---	4000
CN42046	03	317	430i Coupe	SA-8	FEDV	T2E0	---	22	D	default mode	---	4000
CN42049	00	318	430i xDrive Coupe	SA-8	FEDV	T2E0	---	21	D	default mode	---	4000
CN42049	01	318	430i xDrive Coupe	SA-8	FEDV	T2E0	---	22	D	default mode	---	4000
FR78445	00	364	430i Gran Coupe	SA-8	FEDV	T2E0	---	21	D	default mode	---	4250
FR78445	01	364	430i Gran Coupe	SA-8	FEDV	T2E0	---	22	D	default mode	---	4250
FR78446	00	365	430i xDrive Gran Coupe	SA-8	FEDV	T2E0	---	21	D	default mode	---	4250
FR78446	01	365	430i xDrive Gran Coupe	SA-8	FEDV	T2E0	---	22	D	default mode	---	4250
9T75014	---	---	X3 xDrive30i	---	DDV	T3E10	---	---	---	---	---	4500

Test parameters are described in the EV-CIS vehicle information

Road Load Configuration Description

X_	means number of FEDV tire groups used for this model
21	Road Load for first FEDV configuration
22	Road Load for second FEDV configuration
30	Road Load for EDV (worst case)

6.2. Test Vehicle Description EVAP EDV

VID	CFG	Model	Type	Fuel	Family
9T75018	00	X3 xDrive30i	EDV EVAP	T3E10	R0150G60

For complete vehicle description, refer to Certification Summary Information Report Sheet, enclosed in Section 7 of this application.
Selection of vehicles carried out according to 40 CFR §86.1828-01(a).

7. Test results (Cover page)

7.1. Certification Summary Information Report submitted to EV-CIS

see attachment:
CSI-VBMXV02.0B4P-VBMXR0150G60

7.2. Litmus Check

see attachment: 03LC-0B4P-02

8. Statements

8.1 Emission Testing Waiver Statements

All applicable vehicles will conform with the emission standards for which emission data is not being submitted, as described in 40 CFR §86.1806-27, §86.1811-27, §86.1829-15 and §86.1865-12. The sections below identify the standards for which BMW uses statements instead of completing emission testing and submitting test data.

Evaporative Leak-Detection

According to §86.1806-17(b)(1)(vi), BMW as the manufacturer states that, consistent with good engineering judgement, for test groups not selected for OBD demonstration testing, all vehicles included in this application comply with the applicable leak monitoring requirement.

HCHO emission compliance

Based on an engineering evaluation of appropriate HCHO emissions, BMW states that all light-duty vehicles included in this application comply with the applicable HCHO emission standards. According to 40 CFR §86.1829-15 (d) (4), BMW uses this statement instead of submitting test data.

High-altitude exhaust and evaporative emissions compliance

Based on an engineering evaluation of appropriate high-altitude emission tests, BMW states that all vehicles included in this application comply with the applicable exhaust and evaporative emissions standards at high altitude. According to 40 CFR §86.1829-15 (c), BMW uses this statement instead of submitting test data. According to 40 CFR §86.1865-12 (h) (3), BMW states that all vehicles included in this application are using their low altitude hardware and software emission control strategies similarly across all altitudes for in-use operation. According to 40 CFR §86.1811-27(c)(4) for Tier 4 vehicles, BMW states based on an engineering evaluation for all vehicles included in this application that common calibration approaches are used at high altitudes. There is no deviation from low altitude emission control practices.

Spitback Testing

BMW states that all vehicles included in this application do not exceed the fuel dispensing spitback standard of 1.0g THCE, as required per §86.1813-17 (c). According to 40 CFR §86.1829-15 (e) (5), BMW uses this statement instead of submitting test data.

8.2 Compliance Statements

"Lean-on-cruise" calibration strategies

There are no "Lean-on-cruise" calibration strategies, as specified in 40 CFR §86.1811-17 (d)(4), incorporated into the design of vehicles included in this application.

91RON-Statement

According to VPCD 97-01, BMW states that differences in city and highway fuel economy test results comparing 91 RON operation and 96 RON operation are not exceeding ±3%. Emission standards are met in both 91 RON and 96 RON operation, as demonstrated via certification testing. EDV testing is performed using Tier 3 E10 fuel with 91 RON, FEDV testing is performed using Tier 2 E0 fuel with 96 RON.

A/C-on specific calibrations-Statement

According to 40 CFR §86.1811-27(d), BMW as the manufacturer states that vehicles included in this application do not use A/ C-on specific calibrations that differ from A/C-off calibrations for a given set of engine operating conditions, which would unnecessarily reduce emission control system effectiveness during A/C-on operation when the vehicle is operated under conditions that may reasonably be expected during normal operation and use.

Cold Temperature Emission Control

According to 40 CFR §86.1809-12 (c) and based on engineering evaluations of emission test restuls between 25°F and 68°F, BMW states that for all vehicles included in this application, the guideline for CO, NMHC or NMOG+N0x (as applicable) emission congruity in the intermediate temperature range is fulfilled.

Corporate Average Fuel Economy Calculation

Since the 2007 model year and in accordance with Dear Manufacturer letter CISD-09-19, BMW uses customer data to analyze whether predominace criteria are met regarding a certain operation mode of multimode transmissions. Usage rates are determined by collecting data from the onboard powertrain and/or transmission control module. Using good engineering judgment, BMW has concluded that it is appropriate to carry-forward and carry-across the results of the earlier surveys where predominant use of one mode has been demonstrated.

Emission Control System Continuity-Statement

According to 40 CFR §86.1809-12 (e) and based on engineering evaluations of emission test results between 20°F and 86°F, BMW states that for all vehicles included in this application, discontinuity of emissions of NMOG, PM, CO, CO2, N2O, NOx, CH4, HCHO emissions on the FTP and Highway tests does not occur when tested at temperatures ranging from 20°F to 86°F.

Engine Oil used for Certification Testing

Based on guidance letters CISD-2008-11, CISD-10-11 and CD-2020-03 BMW confirms that vehicles included in this application fulfill the "representativeness" requirements as specified in 40 CFR 600.007(b)(6) with regards to engine oils used in the respectice test vehicles. BMW uses the factory-fill oil for mileage accumulation, durability, emission and fuel economy testing. The specific oil's SAE viscosity grade used is included in the CSI information of each application. BMW uses non-API-registered, fully synthetic oils. For factory fill, 5W-30, 0W-12, 0W-20, and 0W-30 oils are used (viscosity grades vary depending on engine variants). For maintenance, BMW recommends a 0W-12, 0W-20 or 0W-30 oil which is equivalent to or superior to the oil used for certification testing. BMW dealers are required to use this oil as part of the maintenance package included with each new vehicle. This approach is used to ensure that the oil used in certification test vehicles is not more fuel efficient than the oil used for factory fill, or the oil recommended to the vehicle owner.

Leak free exhaust system

Based on an engineering analysis of the complete exhaust system, BMW as the manufacturer states that the exhaust systems installed on any vehicles included in this application comply with the requirements set forth in § 86.1844-01(d)(16). The analysis covers the exhaust system and all related, attached components (from the engine block manifold gasket surface to a point sufficiently past the last catalyst and oxygen sensor in the system) to assure that air will not reach the oxygen sensors under normal operating conditions.

OBD system

According to 40 CFR 86.1844-01 (d)(9)(iv), BMW states that the emission control diagnostic system installed on any vehicle included in this application is adequate for the performance warranty test described in 40 CFR Part 85 subpart W.

9. OBD System Description

The OBD System Description of this Test Group, MY 2027 has been uploaded separately to EV-CIS.

10. Description of Alternate-fueled Vehicles

not applicable

11. Auxiliary Emission Control Devices (AECD) descriptions

Confidential Information: Please refer to uploaded AECD document in EV-CIS

12. Description of vehicles and test parameters covered by certificate

12.1. Vehicle Parameters

12.1.1. Vehicle Information

Model Name	Carline	Trans	Vehicle Class	VCW [lbs]	ETW [lbs]	GVW [lbs]	Tank [gal]	Canister Working Capacity [g]	Canister Bed Volume [ccm]	Hydrocarbon Trap - Fleece
430i Convertible	324	SA	LDV	4026	4250	4971	15.6	150	2600	No
430i Coupe	317	SA	LDV	3677	4000	4575	15.6	150	2600	No
430i Gran Coupe	364	SA	LDV	3898	4250	5060	15.6	150	2600	No
430i xDrive Convertible	325	SA	LDV	4145	4500	5104	15.6	150	2600	No
430i xDrive Coupe	318	SA	LDV	3805	4000	4707	15.6	150	2600	No
430i xDrive Gran Coupe	365	SA	LDV	4019	4250	5181	15.6	150	2600	No
X3 xDrive30	--	SA	LDT 2	4176	4500	5512	17.2	150	2600	--

12.1.2. Drive Train Information

Model Name	Carline	Trans-Type (-drive Sys.)	# Gears	Axle ratio		Engine Code	Combustion engine power [hp / rpm]	Combustion engine torque ft-lb / rpm
				front	rear			
430i Convertible	324	SA (R)	8	not applicable	2.81	B48B20O2G23S	255 / 4700	295 / 1600 - 4500
430i Coupe	317	SA (R)	8	not applicable	2.81	B48B20O2G22S	255 / 4700	295 / 1600 - 4500
430i Gran Coupe	364	SA (R)	8	not applicable	2.92	B48B20O2G26S	255 / 4700	295 / 1600 - 4500
430i xDrive Convertible	325	SA (A)	8	2.81	2.81	B48B20O2G23X	255 / 4700	295 / 1600 - 4500
430i xDrive Coupe	318	SA (A)	8	2.81	2.81	B48B20O2G22X	255 / 4700	295 / 1600 - 4500
430i xDrive Gran Coupe	365	SA (A)	8	2.92	2.92	B48B20O2G26X	255 / 4700	295 / 1600 - 4500
X3 xDrive30	--	SA (A)	8	3.38	3.38	B48B20O2G45X	255 / 4700	295 / 1600 - 4500

12.1.3. Tire Information

Modell	Carline	Trans	Road Load CFG	Tire Front	Tire Rear
430i Convertible	324	SA	21	225/40 R19 93H M+S RSC	225/40 R19 93H M+S RSC
				225/45 R18 95H M+S RSC STD	225/45 R18 95H M+S RSC STD
				225/45 R18 95Y RSC	225/45 R18 95Y RSC
				225/40 R19 93Y RSC	255/35 R19 96Y RSC
			22	225/40 R19 93Y RSC STD (HP)	255/35 R19 96Y RSC STD (HP)
				225/45 R18 95Y RSC	255/40 R18 99Y RSC
430i Coupe	317	SA	21	225/40 R19 93H M+S RSC	225/40 R19 93H M+S RSC
				225/40 R19 93Y RSC	255/35 R19 96Y RSC
				225/45 R18 95Y RSC	225/45 R18 95Y RSC
				225/45 R18 95H M+S RSC STD	225/45 R18 95H M+S RSC STD
			22	225/35 R20 90Y RSC	255/30 R20 92Y RSC
				225/45 R18 95Y RSC	255/40 R18 99Y RSC
				225/40 R19 93Y RSC STD (HP)	255/35 R19 96Y RSC STD (HP)
430i Gran Coupe	364	SA	21	245/45 R18 100H M+S RSC	245/45 R18 100H M+S RSC
				245/35 R20 95Y STD	255/35 R20 97Y STD
				245/40 R19 98H M+S STD	255/40 R19 100H M+S STD
				245/40 R19 98Y RSC STD	255/40 R19 100Y RSC STD
				245/45 R18 100Y RSC STD	245/45 R18 100Y RSC STD
			22	245/40 R19 98Y STD (HP)	255/40 R19 100Y STD (HP)
				245/35 R20 95Y STD	255/35 R20 97Y STD

430i xDrive Convertible	325	SA	21	225/45 R18 95H M+S RSC STD	225/45 R18 95H M+S RSC STD
				225/40 R19 93Y RSC	255/35 R19 96Y RSC
				225/45 R18 95Y RSC	225/45 R18 95Y RSC
				225/40 R19 93H M+S RSC	225/40 R19 93H M+S RSC
			22	225/40 R19 93Y RSC STD (HP)	255/35 R19 96Y RSC STD (HP)
				225/45 R18 95Y RSC	255/40 R18 99Y RSC
430i xDrive Coupe	318	SA	21	225/45 R18 95Y RSC	225/45 R18 95Y RSC
				225/40 R19 93H M+S RSC	225/40 R19 93H M+S RSC
				225/45 R18 95H M+S RSC STD	225/45 R18 95H M+S RSC STD
				225/40 R19 93Y RSC	255/35 R19 96Y RSC
			22	225/45 R18 95Y RSC	255/40 R18 99Y RSC
				225/40 R19 93Y RSC STD (HP)	255/35 R19 96Y RSC STD (HP)
				225/35 R20 90Y RSC	255/30 R20 92Y RSC
430i xDrive Gran Coupe	365	SA	21	245/45 R18 100H M+S RSC	245/45 R18 100H M+S RSC
				245/35 R20 95Y STD	255/35 R20 97Y STD
				245/40 R19 98H M+S STD	255/40 R19 100H M+S STD
				245/40 R19 98Y RSC STD	255/40 R19 100Y RSC STD
				245/45 R18 100Y RSC STD	245/45 R18 100Y RSC STD
			22	245/40 R19 98Y STD (HP)	255/40 R19 100Y STD (HP)
				245/35 R20 95Y STD	255/35 R20 97Y STD
X3 xDrive30	--	SA	30	worst case represented	worst case represented

M+S indicates an All-Season tire and not a dedicated Winter tire
(Winter) indicates a dedicated Winter tire
AT indicates an All-Terrain tire
HP indicates a High-Performance tire

RSC indicates a tire with run flat capability
STD indicates a tire without run flat capability

12.1.4. Emission control system description:

12.1.4.1.	Catalyst	TWC
12.1.4.2.	Particulate Filter	yes
12.1.4.3.	EGR / EGRC	EGR: no EGRC: not applicable
12.1.4.4.	Air pump type	not applicable
12.1.4.5.	Fuel system type	direct- and intake manifold injection
12.1.4.6.	Intake air aspiration method	Exhaust gas turbo charger with charge pressure control via wastegate
12.1.4.7.	Other	Charged Air Cooler

12.1.5. Number of valves per cylinder 4

12.1.6. Engine displacement 1998 cm³

12.1.7. Certification Region FA

12.1.8. Shift Indicator Light not applicable

12.2. Test Parameters

12.2.1. Engine Starting Procedures — Refer to Common Section

12.2.2. Shift Schedules — not applicable

12.2.3. Dynamometer loading information

12.2.3.1. Sort of dynamometer — all wheel roll

12.2.3.2. Electric Dynamometer Coefficients

Modell	Carline	Trans	Road Load CFG	N/V	A [lbf]	B [lbf/mph]	C [lbf/mph²]	TRLHP	a [lbf]	b [lbf/mph]	c [lbf/mph²]	Grill Shutter
430i Convertible	324	SA	21	24	43.7	-0.091	0.01968	11.8	20.8	0.183	0.01517	Yes
430i Convertible	324	SA	22	24	52.2	-0.069	0.02030	13.3	26.9	0.287	0.01511	Yes
430i Coupe	317	SA	21	24	42.9	-0.093	0.01887	11.4	20.5	0.160	0.01465	Yes
430i Coupe	317	SA	22	24	50.9	-0.073	0.01955	12.8	28.8	0.159	0.01544	Yes
430i Gran Coupe	364	SA	21	24.3	41.5	-0.034	0.01950	11.8	19.7	0.237	0.01527	Yes
430i Gran Coupe	364	SA	22	24.3	46.5	-0.021	0.01955	12.6	22.3	0.331	0.01467	Yes
430i xDrive Convertible	325	SA	21	24	46.3	-0.050	0.01987	12.5	8.6	0.092	0.01553	Yes
430i xDrive Convertible	325	SA	22	24	55.1	-0.027	0.02049	14.0	17.1	0.150	0.01587	Yes
430i xDrive Coupe	318	SA	21	24	44.2	-0.056	0.01917	11.9	5.4	0.039	0.01608	Yes
430i xDrive Coupe	318	SA	22	24	52.1	-0.035	0.01985	13.3	13.6	0.198	0.01480	Yes
430i xDrive Gran Coupe	365	SA	21	24	44.4	-0.051	0.02007	12.3	3.4	0.123	0.01560	Yes
430i xDrive Gran Coupe	365	SA	22	24	49.4	-0.039	0.02012	13.0	6.7	0.154	0.01570	Yes
X3 xDrive30	--	SA	30	26.2	44.2	0.118	0.02266	14.2	12.3	0.085	0.02003	Yes

Road Load Configuration Description

X_ means number of FEDV tire groups used for this model
21 Road Load for first FEDV configuration
22 Road Load for second FEDV configuration
30 Road Load for EDV (worst case)

12.3. Hybrid Electric Vehicle System Description

12.3.1. Description of electric motor

Model Name	Type	Power (peak) [kW]	Max. torque [Nm]
430i Convertible	48V-Belt-Driven Starter Generator (SGR)	8 @ 6000	25
430i Coupe	48V-Belt-Driven Starter Generator (SGR)	8 @ 6000	25
430i Gran Coupe	48V-Belt-Driven Starter Generator (SGR)	8 @ 6000	25
430i xDrive Convertible	48V-Belt-Driven Starter Generator (SGR)	8 @ 6000	25
430i xDrive Coupe	48V-Belt-Driven Starter Generator (SGR)	8 @ 6000	25
430i xDrive Gran Coupe	48V-Belt-Driven Starter Generator (SGR)	8 @ 6000	25

12.3.2. Description of batteries

Model Name	System Chemistry	Capacity (C) [Ah]	Energy Capacity (E) [kWh]	Nominal Voltage [V]	Min. Voltage Pack [V]	Number of Packs	Number of Modules	Number of Battery Cells
430i Convertible	LI-ION	10.0	0.44	44.0	38.0	1	1	20
430i Coupe	LI-ION	10.0	0.44	44.0	38.0	1	1	20
430i Gran Coupe	LI-ION	10.0	0.44	44.0	38.0	1	1	20
430i xDrive Convertible	LI-ION	10.0	0.44	44.0	38.0	1	1	20
430i xDrive Coupe	LI-ION	10.0	0.44	44.0	38.0	1	1	20
430i xDrive Gran Coupe	LI-ION	10.0	0.44	44.0	38.0	1	1	20

Model Name	Cell format	Min. Voltage Cell [V]	Weight [kg]	Specific Energy Density [Wh/kg]	Chemistry Identifier
430i Convertible	pouch	1.90	11.0	40	Li MM(NMC) - Ti.F
430i Coupe	pouch	1.90	11.0	40	Li MM(NMC) - Ti.F
430i Gran Coupe	pouch	1.90	11.0	40	Li MM(NMC) - Ti.F
430i xDrive Convertible	pouch	1.90	11.0	40	Li MM(NMC) - Ti.F
430i xDrive Coupe	pouch	1.90	11.0	40	Li MM(NMC) - Ti.F
430i xDrive Gran Coupe	pouch	1.90	11.0	40	Li MM(NMC) - Ti.F

12.4. Information on driver selectable modes

Drive Mode	Default Mode	Function
comfortable	yes	comfortable setting for defined systems (e.g. climatic control, gas pedal progression)
efficiently	no	efficient setting for defined systems (e.g. climatic control, gas pedal progression)
sporty	no	sporty setting for defined systems (e.g. steering, gas pedal progression, shift points, less pure electric drive, e-boost)

Transmission Mode	Default Mode	Function
comfortable	no	standard comfortable vehicle gear operation
sporty	no	sporty setting for shift points

12.5. Modes used for EDV Testing

Test EDV:

VID	CFG	Fuel	FTP	HWY	US06	SC03	Cold CO
9T75002	00	T3E10	SBMX10086056	SBMX10086055	SBMX10086057	SBMX10086058	SBMX10086060
9T75002	03	T2E0	SBMX10086054	SBMX10086053	---	---	---

Drive Mode
T3E10 EDV testing is done in drive mode "Sport" (sporty) and transmission mode "S" (sporty). This is the worst case combination with highest engine revolutions. T2E0 EDV testing is done in drive mode "Comfort" (comfortable) and transmission mode "D" (comfortable). This represents the default mode.

13. Projected Sales

Refer to Common Section for Model Year 2027

14. Request for certification

We herewith apply for the Federal Certificate of conformity for the Test Group VBMXV02.0B4P.

The mentioned Test Group complies with all applicable regulations contained in 40 Code of Federal Regulations Part 85 and Part 86.

Dr. Bernd Ofner

15. Other Information

15.1. Vehicle Emission Control Information Label

Label according to certification requirements in 40 CFR § 86.1807-01.

The VECI label is attached to the engine hood.

Refer to Section 17, Attachment

Carline	Model Name	VECI Label
317	430i Coupe	see attachment: 03VE-VB4P-01
318	430i xDrive Coupe	
324	430i Convertible	
325	430i xDrive Convertible	
364	430i Gran Coupe	
365	430i xDrive Gran Coupe	

15.2. Fuel Tank Temperature Profile

Fuel Tank Temperature Profile according to certification requirements in 40 CFR § 86.129-94(d).

Refer to Section 17, Attachment

Carline	Model Name	Evaporative Group	FTTP
317	430i Coupe	VBMXR0150G60	see attachment: FTTP-0G60-02
318	430i xDrive Coupe		
324	430i Convertible		
325	430i xDrive Convertible		
364	430i Gran Coupe		
365	430i xDrive Gran Coupe		

17. Attachment

17.1	Fuel Tank Temperature Profile	see attachment: FTTP-0G60-02
17.2	VECI Label	see attachment: 03VE-VB4P-01
17.3	Litmus Check	see attachment: 03LC-0B4P-02
17.4	Certification Summary Information Report	see attachment: CSI-VBMXV02.0B4P-VBMXR0150G60

Test Vehicle Data		**Ambient Conditions**		**Test Data**	
Vehicle Type:	X3 xDrive30i	Weather:	sunny	Date of test:	10/09/2023
Mileage:	6946 mi	clouds:	1 %	Engine start:	11:43
Fuel tank volume:	65 L	Wind speed:	0 mph	Measure start:	11:49
Fuel volume:	26 L	Ambient temp:		Measure stop:	13:01
		Start:	107 °F	Test track:	Dubai Bab Al Shams
		delta:	2 °F		
		Surface temperature:	100 %		

Time [s]	Fuel Temp 1 [°F]	Fuel Temp 2 [°F]	Fuel Temp Average [°F]	Fuel Temp Average Correctet (to95°F) [°F]	Vapor Temp [°F]	Tank pressure [in H_2O]
0	91,8	91,7	91,7	95,0	92,9	-0,5
30	91,8	91,8	91,8	95,1	93,1	-0,9
60	92,0	92,0	92,0	95,2	93,2	-2,2
90	92,1	92,1	92,1	95,3	93,3	-2,4
120	92,2	92,2	92,2	95,4	93,4	-0,6
150	92,3	92,3	92,3	95,5	93,5	-2,0
180	92,4	92,4	92,4	95,6	93,6	-1,3
210	92,5	92,5	92,5	95,7	93,8	-1,3
240	92,6	92,5	92,6	95,9	93,9	-0,6
270	92,8	92,7	92,7	96,0	94,0	-2,3
300	92,9	92,9	92,9	96,2	94,2	-0,7
330	93,1	93,1	93,1	96,3	94,3	-1,7
360	93,2	93,2	93,2	96,5	94,5	-0,8
390	93,3	93,4	93,4	96,6	94,6	-0,4
420	93,5	93,5	93,5	96,8	94,8	-0,8
450	93,7	93,7	93,7	96,9	95,0	-2,5
480	93,8	93,8	93,8	97,1	95,1	-0,9
510	93,9	93,9	93,9	97,2	95,2	-2,1
540	94,1	94,1	94,1	97,3	95,3	-1,0
570	94,2	94,2	94,2	97,4	95,4	-1,3
600	94,4	94,3	94,3	97,6	95,5	-2,1
630	94,5	94,4	94,4	97,7	95,6	-0,5
660	94,6	94,5	94,6	97,8	95,8	-2,8
690	94,7	94,7	94,7	98,0	95,9	-3,4
720	94,9	94,8	94,9	98,1	96,0	-0,5
750	95,1	95,0	95,0	98,3	96,2	-0,6
780	95,2	95,1	95,2	98,4	96,3	-2,4
810	95,3	95,2	95,3	98,5	96,4	-2,1
840	95,4	95,4	95,4	98,7	96,5	-1,9
870	95,6	95,5	95,6	98,8	96,6	-1,3
900	95,7	95,7	95,7	99,0	96,8	-2,6
930	95,9	95,8	95,8	99,1	97,0	-1,8
960	96,0	95,9	96,0	99,2	97,1	-1,5
990	96,2	96,1	96,1	99,4	97,2	-1,7
1020	96,3	96,2	96,2	99,5	97,3	-0,6
1050	96,4	96,4	96,4	99,6	97,5	-1,1

1080	96,5	96,5	96,5	99,7	97,6	-0,4
1110	96,6	96,6	96,6	99,9	97,7	-3,7
1140	96,8	96,8	96,8	100,0	97,8	-0,6
1170	96,9	96,9	96,9	100,2	97,9	-1,3
1200	97,0	97,1	97,1	100,3	98,0	-1,2
1230	97,2	97,2	97,2	100,4	98,1	-1,1
1260	97,3	97,3	97,3	100,5	98,2	-2,1
1290	97,3	97,4	97,4	100,7	98,4	-2,2
1320	97,5	97,5	97,5	100,8	98,5	-0,5
1350	97,6	97,7	97,7	100,9	98,6	-1,0
1380	97,8	97,8	97,8	101,1	98,7	-0,4
1410	98,0	97,9	98,0	101,2	98,8	-0,4
1440	98,2	98,1	98,1	101,4	98,9	-2,8
1470	98,3	98,2	98,2	101,5	99,1	-2,8
1500	98,4	98,3	98,4	101,6	99,2	-2,0
1530	98,5	98,4	98,5	101,7	99,4	-3,1
1560	98,6	98,5	98,6	101,8	99,5	-0,7
1590	98,8	98,7	98,7	102,0	99,6	-1,4
1620	98,9	98,8	98,9	102,1	99,6	-0,6
1650	99,0	98,9	99,0	102,2	99,8	-2,7
1680	99,1	99,0	99,1	102,4	99,9	-1,6
1710	99,3	99,2	99,2	102,5	100,0	-0,5
1740	99,4	99,4	99,4	102,6	100,1	-3,2
1770	99,5	99,5	99,5	102,8	100,2	-1,0
1800	99,6	99,6	99,6	102,9	100,3	-0,9
1830	99,8	99,7	99,7	103,0	100,3	-0,7
1860	99,9	99,9	99,9	103,1	100,4	-2,5
1890	100,0	100,0	100,0	103,3	100,5	-2,6
1920	100,1	100,1	100,1	103,4	100,5	-1,6
1950	100,2	100,2	100,2	103,5	100,6	-1,5
1980	100,4	100,3	100,3	103,6	100,6	-3,0
2010	100,5	100,4	100,4	103,7	100,7	-1,8
2040	100,6	100,5	100,5	103,8	100,9	-1,3
2070	100,7	100,7	100,7	104,0	101,0	-0,5
2100	100,9	100,8	100,8	104,1	101,1	-2,9
2130	101,0	101,0	101,0	104,3	101,2	-2,9
2160	101,2	101,1	101,1	104,4	101,3	-0,8
2190	101,3	101,2	101,3	104,5	101,4	-1,6
2220	101,4	101,3	101,4	104,6	101,5	-1,1
2250	101,5	101,4	101,5	104,7	101,6	-1,0
2280	101,6	101,5	101,6	104,8	101,7	-1,0
2310	101,8	101,7	101,7	105,0	101,8	-0,7
2340	101,9	101,8	101,9	105,1	101,9	-0,6
2370	102,0	102,0	102,0	105,2	102,0	-1,4
2400	102,1	102,1	102,1	105,4	102,1	-0,7
2430	102,2	102,2	102,2	105,5	102,2	-1,5
2460	102,4	102,3	102,4	105,6	102,3	-2,7
2490	102,5	102,4	102,5	105,7	102,4	-1,3
2520	102,6	102,6	102,6	105,8	102,5	-1,3
2550	102,7	102,7	102,7	105,9	102,5	-1,6
2580	102,8	102,8	102,8	106,0	102,6	-4,0
2610	102,9	102,9	102,9	106,2	102,7	-1,6
2640	103,0	103,0	103,0	106,3	102,8	-1,1
2670	103,2	103,1	103,2	106,4	102,9	-0,9
2700	103,3	103,3	103,3	106,5	103,0	-2,9
2730	103,4	103,4	103,4	106,7	103,1	-3,5

2760	103,5	103,5	103,5	106,8	103,3	-3,4
2790	103,7	103,6	103,6	106,9	103,4	-3,4
2820	103,8	103,7	103,8	107,0	103,6	-0,5
2850	103,9	103,8	103,9	107,1	103,6	-0,8
2880	104,0	104,0	104,0	107,2	103,7	-1,7
2910	104,1	104,1	104,1	107,4	103,8	-2,0
2940	104,2	104,2	104,2	107,5	103,9	-1,6
2970	104,4	104,3	104,3	107,6	104,0	-3,1
3000	104,5	104,4	104,4	107,7	104,1	-1,1
3030	104,6	104,4	104,5	107,8	104,2	-1,1
3060	104,7	104,6	104,6	107,9	104,3	-0,8
3090	104,8	104,7	104,8	108,0	104,4	-1,0
3120	104,9	104,8	104,9	108,1	104,5	-0,5
3150	105,0	105,0	105,0	108,3	104,7	-0,7
3180	105,1	105,1	105,1	108,4	104,8	-1,3
3210	105,3	105,2	105,2	108,5	104,9	-1,2
3240	105,4	105,4	105,4	108,6	105,0	-0,8
3270	105,5	105,5	105,5	108,7	105,2	-1,4
3300	105,6	105,6	105,6	108,9	105,3	-1,4
3330	105,7	105,7	105,7	109,0	105,4	-3,5
3360	105,9	105,8	105,8	109,1	105,5	-0,6
3390	106,0	105,9	106,0	109,2	105,6	-1,6
3420	106,1	106,0	106,1	109,3	105,7	-1,3
3450	106,2	106,1	106,2	109,4	105,8	-1,6
3480	106,3	106,3	106,3	109,5	105,9	-0,7
3510	106,4	106,4	106,4	109,6	106,0	-2,4
3540	106,5	106,5	106,5	109,8	106,1	-1,1
3570	106,6	106,6	106,6	109,9	106,2	-0,6
3600	106,8	106,8	106,8	110,0	106,3	-1,7
3630	106,9	106,9	106,9	110,2	106,4	-0,8
3660	107,0	107,0	107,0	110,3	106,5	-1,2
3690	107,1	107,1	107,1	110,4	106,5	-1,1
3720	107,3	107,2	107,2	110,5	106,6	-0,6
3750	107,4	107,3	107,4	110,6	106,8	-2,0
3780	107,5	107,4	107,4	110,7	106,9	-1,0
3810	107,5	107,5	107,5	110,8	107,0	-1,1
3840	107,6	107,6	107,6	110,9	107,1	-0,6
3870	107,7	107,7	107,7	111,0	107,2	-1,9
3900	107,8	107,8	107,8	111,1	107,3	-0,6
3930	107,9	107,9	107,9	111,2	107,4	-2,7
3960	108,0	108,0	108,0	111,3	107,5	-0,5
3990	108,2	108,1	108,1	111,4	107,6	-0,6
4020	108,3	108,2	108,3	111,5	107,7	-1,4
4050	108,4	108,4	108,4	111,6	107,8	-0,7
4080	108,5	108,5	108,5	111,8	107,9	-1,6
4110	108,6	108,6	108,6	111,9	108,0	-2,3
4140	108,8	108,7	108,7	112,0	108,1	-0,8
4170	108,9	108,8	108,8	112,1	108,2	-0,5
4200	109,0	108,9	108,9	112,2	108,3	-2,3
4230	109,1	109,0	109,0	112,3	108,4	-0,6
4260	109,2	109,1	109,1	112,4	108,5	-2,8
4290	109,3	109,2	109,2	112,5	108,6	-2,9
4320	109,3	109,3	109,3	112,6	108,7	-3,0

BMW

Designation

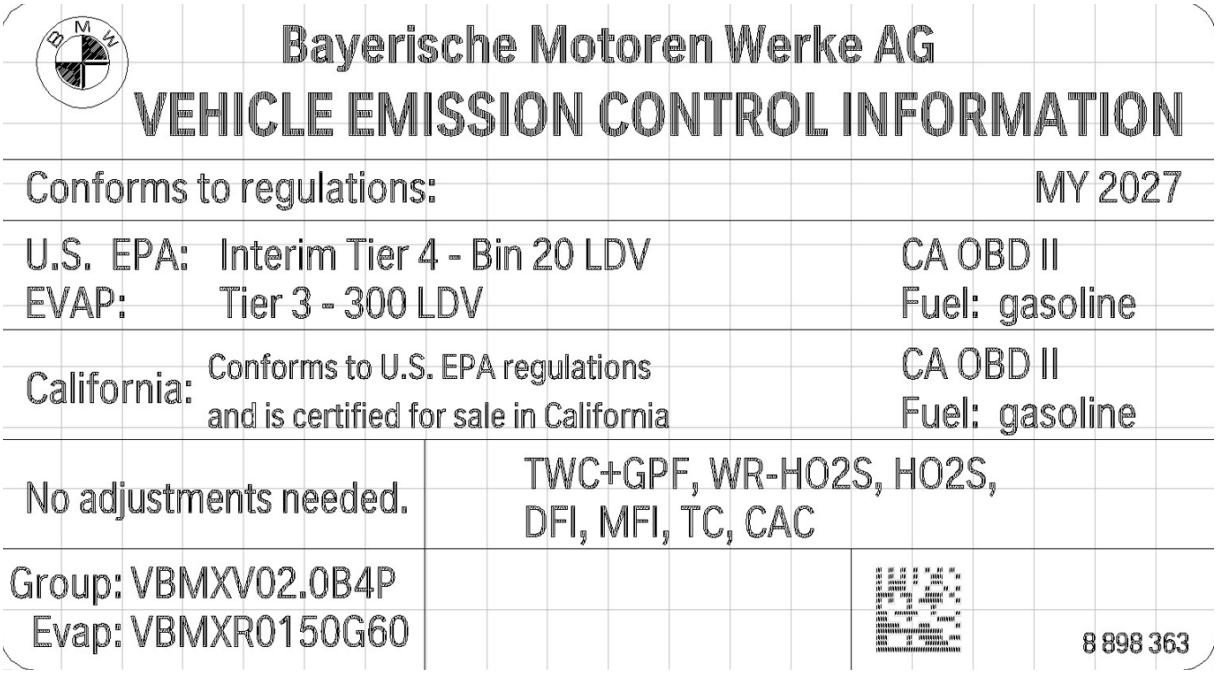
Attachment

VECI Label LDV, VBMXV02.0B4P, VBMXR0150G60

Date: 03.12.2025

03VE-VB4P-01

DRAFT - Inverted Representation



Original representation

Base: Black
Characters: Silver

Enclosure to Certification Summary Information Report

Test	Test Number	Test Procedure	Man FE	FE Bag1	FE Bag2	FE Bag3	FE Bag4
FTP75	SBMX10086056	31	24.8	23.9	23.8	26.9	24.6
HWFET	SBMX10086055	3	35.6				
US06	SBMX10086057	90		16.7	29.0		
SC03	SBMX10086058	95		17.4			
Cold CO	SBMX10086060	11		17.6	21.6	23.8	

Model Specific Calculation (5 Cycle)

City	[mi/gallon]
Start FC	0.0024
Start Fuel 75	0.0221
Start Fuel 20	0.0533
Running FC	0.0446
Label City (5 Cycle)	19.3

Highway	[mi/gallon]
Start FC	0.0002
Start Fuel 75	0.0221
Start Fuel 20	0.0533
Running FC	0.0343
Label Highway (5 Cycle)	26.2

Derived Calculation (2 Cycle)

Label City (2 Cycle)	19.7
Threshhold (96% Derived MPG - 2 Cycle)	18.9

Label Highway (2 Cycle)	25.3
Threshhold (95% Derived MPG - 2 Cycle)	24.0

Model Specific Calculation Label City (5 Cycle)	Threshhold City (96% Derived MPG - 2 Cycle)	Model Specific Calculation Label Highway (5 Cycle)	Threshhold HWY (95% Derived MPG - 2 Cycle)
19.3	18.9	26.2	24.0

Certification Summary Information Report

Manufacturer	BMW	**Manufacturer Code**	BMX
Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60
Certificate Number	--	**CARB Executive Order #**	--
Certificate Issue Date	--	**Certificate Revision Date**	--
Certificate Effective Date	--	**Conditional Certificate**	--
CSI Revision #	--	**CSI Submission/Revision Date**	04/21/2026 07:06:28 AM
Model Year	2027		

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Test Group Information

CSI Type	Running Change	**Running Change Reference Number**	27-V02.0B4P-01
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 & ported injection	No

Drive Source #2: Electric Motor

Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator
Electricity	--	--

Hybrid Indicator	Yes		
Multiple Fuel Storage	--	**Rechargeable Energy Storage System Indicator**	Yes
Multiple Fuel Combustion	--	**Off-board Charge Capable Indicator**	No
Fuel Cell Indicator	No	**EPA Vehicle Class**	LDV
Federal Clean Fuel Vehicle	No	**Federal Clean Fuel Vehicle Standard**	--
Federal Clean Fuel Vehicle ILEV	No	**California Partial Zero Emissions Vehicle Indicator**	--
Durability Group Name	VBMXHHGVNV1P	**Durability Group Equivalency Factor**	1
Reduced Fee Test Group	No	**Certification Region Code(s)**	FA
Complies with HD GHG 2b/3 regulations?	No		
Introduction into Commerce Date	04/01/2026	**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	No		
OBD Compliance Type	CARB	**OBD Demonstration Vehicle Test Group**	VBMXV02.0B4P
Test Group OBD Compliance Level	Partial - with deficiencies	**Number of Test Group OBD Deficiencies**	1
OBD Deficiencies Comments	E-25-316; E-26-092		
Mfr Test Group Comments	--		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Evaporative/Refueling Family Information

Evaporative Summary Information Type	New	**Submission/Correction Date**	10/07/2025 07:55:49 AM
Integrated ORVR?	Yes	**Fuel(s)**	Gasoline
Multiple Fuel Storage	--		
Bladder Fuel Tank?	No		
Fuel Tank Material	Plastic	**Fuel Tank Material Description**	HDPE
Fill Pipe Seal Type	Liquid seal		
Air Intake System Vapor Storage Device?	No	**Air Intake System Vapor Storage Device Description**	--
Fuel System Vapor Storage Canister?	Yes	**Other Vapor Storage**	--
Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)	150	**Number of Primary Canisters**	1
Number of Bleed Canisters	0	**Bleed Canister Total Working Capacity (grams)**	--
Mfr Evaporative/Refueling Family Comments	--		

Leak Family Details

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

Models Covered by this Certificate

Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - Type	- # of Gears	Trans - Lockup
BMW	1 - BMW	365 - 430i xDrive Gran Coupe	Federal	2-Wheel Drive, Rear	Semi-Automatic	8	Yes
BMW	1 - BMW	318 - 430i xDrive Coupe	Federal	All Wheel Drive	Semi-Automatic	8	Yes
BMW	1 - BMW	325 - 430i xDrive Convertible	Federal	All Wheel Drive	Semi-Automatic	8	Yes
BMW	1 - BMW	317 - 430i Coupe	Federal	2-Wheel Drive, Rear	Semi-Automatic	8	Yes
BMW	1 - BMW	364 - 430i Gran Coupe	Federal	All Wheel Drive	Semi-Automatic	8	Yes
BMW	1 - BMW	324 - 430i Convertible	Federal	2-Wheel Drive, Rear	Semi-Automatic	8	Yes

Engine Description

Hybrid Type	IC Engine/Electric Motor	**Hybrid Description**	Fuel Economy Guide Category MHEV (Mild Hybrid Electric Vehicle)
Engine Type	4-Stroke Spark Ignition	**Mfr Engine Description**	--
Engine Block Arrangement	Inline	**Mfr Engine Block Arrangement Description**	--
Camless Valvetrain Indicator	No	**Oil Viscosity/Classification**	0W-12
Number of Cylinders/Rotors	4	**Mechanically Variable Compression Ratio Indicator**	N

Certification Summary Information Report

Test Group	VBMXV02.0B4P	Evaporative/Refueling Family	VBMXR0150G60

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	Other	Palladium + Rhodium	Ceramic	Monolith

Mfr After Treatment Device (ATD) Comments	After Treatment Device #2: Gasoline particulate filter (GPF)
Direct Ozone Reduction (DOR) Device	Not Equipped
Mfr Emission Control Device Comments	--

Engine Configuration Number 1

Engine Displacement (liters)	2.0	**Engine Rated Horsepower**	255
Number of Inlet Valves Per Cylinder	2	**Number of Exhaust Valves Per Cylinder**	2
Air Aspiration Method	Turbocharged	**Number of Air Aspiration Devices**	1
Air Aspiration Device Configuration	Single	**Charge Air Cooler Type**	Air
Air Aspiration Drive Method(s)	Mechanical		
Cylinder Deactivation	No		
Cylinder Deactivation Description	--		
Variable Valve Timing	Yes		
Variable Valve Timing System Description	Variable Valve Timing at inlet and outlet valves		
Variable Valve Lift?	Yes		
Variable Valve Lift System Description	Variable Valve Lift at inlet valves and two settings at outlet valves		
Number of Knock Sensors	2	**Number of Air/Fuel Sensors**	2
Air/Fuel Sensor # 1 Type	Air fuel	**Air/Fuel Sensor # 1 Description**	--
Air/Fuel Sensor # 2 Type	Heated oxygen	**Air/Fuel Sensor # 2 Description**	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	**Cooled Exhaust Gas Recirculation**	No
EGR Type	--	**Exhaust Gas Recirculation Description if 'Other'**	--
Closed Loop Air Injection System	No		
Air Injection Type	--	**Air Injection Type if 'Other'**	--
Mfr Engine Configuration Comments	--		

Official Test Numbers

Test Group Fuel	FTP	US06	SC03	Cold CO	Highway	EPA City Litmus Value	EPA City Litmus Threshold	EPA Highway Litmus Value	EPA Highway Litmus Threshold	CREE Weighting Factor
Electricity	--	--	--	--	--	--	--	--	--	--
Gasoline	SBMX10086056	SBMX10086057	SBMX10086058	SBMX10086060	SBMX10086055	23.4	228.2	35.2	286.1	--

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

SFTP LEV-III Official Test Numbers

Test Group Fuel	FTP	US06	SC03
Gasoline	SBMX91005970	SBMX91005971	SBMX10086058
Gasoline	SBMX10086056	SBMX10086057	SBMX10086058

Hybrid Electric Vehicle And Fuel Cell Information

Rechargable Energy Storage System	Battery(s)	**Rechargable Energy Storage System, if Other**	--
Battery Type	Lithium Ion	**Number of Battery Packs**	1
Total Voltage of Battery Packs	44	**Battery Energy Capacity**	10.0
Battery Specific Energy	40.0	**Battery Charger Type**	On-Board
Number of Capacitors	--	**Capacitor Rating (In Farads)**	--
Mfr Capacitor Comments	--		
Hydraulic System Description	--		
Regenerative Braking Type	Electrical Regen Brake		
Regenerative Braking Source	Both	**Driver Controlled Regenerative Braking**	No
Mfr Regenerative Braking Description	--		
Drive Motor(s)/Generator(s)	1		
Motor/Generator Type 1	EESM	**Rated Motor/Generator Power**	8
Mfr Fuel Cell Description	--		
Fuel Cell On-Board H2 Storage Capacity (kg)	--	**Usable H2 Fill Capacity (kg)**	--
Mfr Hybrid Electric/ Electric Vehicle Comments	430i Convertible, 430i Coupe, 430i xDrive Convertible 430i xDrive Coupe; 430i Gran Coupe; 430i xDrive Gran Coupe: Battery Energy Capacity 10.0 Ah, Total Voltage of Battery Pack(s) 44 V, Battery Specific Energy 40.0 Wh/kg, Motor/Generator Type: EESM 8 kW Starter Generator Engine with 48V Technology; Motor/Generator Type: externally excited synchronuous machine (EESM)		

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Emission Data Vehicle Information

Vehicle ID / Configuration	9T75002 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	SBMXJ02.0B4P	**Original Evaporative/Refueling Family**	SBMXR0150G60
Original Test Vehicle Model Year	2025		

Vehicle Model

Represented Test Vehicle Make	BMW	**Represented Test Vehicle Model**	X3 xDrive30i

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
2	Electric Motor	Electricity

Hybrid Indicator	Yes		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	No	**Rechargeable Energy Storage System Indicator**	Yes
Rechargeable Energy Storage System	Battery(s)	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	No		
Odometer Correction -- Initial	1	**Odometer Correction Factor**	1
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Miles		
Engine Code	B48B20O2G45X	**Rated Horsepower**	255
Displacement (liters)	2		
Air Aspiration Method	Turbocharged	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	1	**Air Aspiration Device Configuration**	Single
Charge Air Cooler Type	Air	**Drive Mode While Testing**	All Wheel Drive
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	4176	**Equivalent Test Weight (pounds)**	4500
GVWR (lbs)	5512	**N/V Ratio**	26.2
Axle Ratio	3.38		
Transmission Type	Semi-Automatic	**# of Transmission Gears**	8
Transmission Lockup	Yes	**Creeper Gear**	No

Certification Summary Information Report

Test Group	VBMXV02.0B4P	Evaporative/Refueling Family	VBMXR0150G60

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	44.2	0.118	0.02266	12.3	0.085	0.02003	14.2
Cold CO	48.7	0.13	0.02493	2.7	0.036	0.02122	N/A
US06	44.2	0.118	0.02266	12.3	0.085	0.02003	N/A

Emission Control Device Comments --

Manufacturer Test Vehicle Comments vi_9T75002_00_EDV_X3 xDrive30i_A_ETW-4500_RG30_S-Sport_S_off

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Test #	**SBMX10086056**	**Test Procedure**	**31 - Federal fuel 3-day exhaust**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/12/2024	**Fuel**	Gasoline
Fuel Batch ID	T10/87	**Fuel Calibration Number**	43
Vehicle Class	LDV/Passenger Car	**DF Type**	Mfr. Determined
Verify Test Lab ID	EETZ Emissions Lab		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4356	**Odometer Units**	K
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	361.3274	--
FE BAG 1 (Bag 1 Fuel Economy)	23.9	23.9
CO2 BAG 2 (Bag 2 Carbon Dioxide)	363.2202	--
FE BAG 2 (Bag 2 Fuel Economy)	23.8	23.8
CO2 BAG 3 (Bag 3 Carbon Dioxide)	321.0182	--
FE BAG 3 (Bag 3 Fuel Economy)	26.9	26.9
CO2 BAG 4 (Bag 4 Carbon Dioxide)	351.2582	--
FE BAG 4 (Bag 4 Fuel Economy)	24.6	24.6
METHANE (CH4 - Methane)	0.00091	--
CO (Carbon Monoxide)	0.146	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-3.807	--
DT-EER (Drive Trace Energy Economy Rating)	-2.567	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-5.369	--
MFR FE (Manufacturer Fuel Economy)	24.8	24.8
NOX (Nitrogen Oxide)	0.00362	--
N2O (Nitrous Oxide)	0.00026	--
HC-NM (Non-methane Hydrocarbon)	0.00333	--
NMOG (Non-methane organic gases)	0.00366	--
PM (Particulate Matter)	0.000178	--
HC-TOTAL (Total Hydrocarbon)	0.00421	--

Certification Summary Information Report

Test Group	VBMXV02.0B4P	Evaporative/Refueling Family	VBMXR0150G60

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	348	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	347.6991	--

Manufacturer Test Comments 01_FTP_9T75002_00_EDV_X3 xDrive30i_A_ETW-4500_RG30_S-Sport_S_off

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	120,000 miles	Federal Tier 3 Bin 20	CREE	999	--	--	--	0.4	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 20	CO	0.15	--	--	--	0.29	--	0.4	1.0	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	CO-COMP	0.57	--	--	--	--	--	0.6	4.2	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	NMOG	0.0037	--	1.10	--	0.0025	--	0.006	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	NMOG+NOX	0.0073	--	--	--	--	--	0.012	0.020	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	NMOG+NOX-COMP	0.0119	--	--	--	--	--	0.012	0.040	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	NOX	0.0036	--	--	--	0.0020	--	0.006	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	PM	0.0002	--	--	--	0.0001	--	0.000	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	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Test #	**SBMX10086060**	**Test Procedure**	**11 - Cold CO**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	28 - Cold CO E10 Regular Gasoline (Tier 3)
Test Date	03/08/2024	**Fuel**	Gasoline
Fuel Batch ID	COE10	**Fuel Calibration Number**	41
Vehicle Class	LDV/Passenger Car	**DF Type**	Mfr. Determined
Verify Test Lab ID	EETZ Emissions Lab		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	2677	**Odometer Units**	K
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	489.707	--
FE BAG 1 (Bag 1 Fuel Economy)	17.6	17.6
CO2 BAG 2 (Bag 2 Carbon Dioxide)	399.8303	--
FE BAG 2 (Bag 2 Fuel Economy)	21.6	21.6
CO2 BAG 3 (Bag 3 Carbon Dioxide)	361.9475	--
FE BAG 3 (Bag 3 Fuel Economy)	23.8	23.8
METHANE (CH4 - Methane)	0.00193	--
CO (Carbon Monoxide)	0.4199	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-3.669	--
DT-EER (Drive Trace Energy Economy Rating)	-2.609	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-4.351	--
MFR FE (Manufacturer Fuel Economy)	21.1	21.1
HC-NM (Non-methane Hydrocarbon)	0.00822	--
HC-TOTAL (Total Hydrocarbon)	0.0101	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	408.0065	--

Manufacturer Test Comments 06_FTPCOLD_9T75002_00_EDV_X3 xDrive30i_A_ETW-4500_RG30_S-Sport_S_off

Certification Summary Information Report

Test Group VBMXV02.0B4P **Evaporative/Refueling Family** VBMXR0150G60

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 20	CO	0.42	--	--	--	0.09	--	0.5	10.0	Pass
Fed	120,000 miles	Federal Tier 3 Bin 20	HC-NM	0.01	--	--	--	0.00	--	0.0	0.3	Pass

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Test #	**SBMX91005970**	**Test Procedure**	**21 - Federal fuel 2-day exhaust (w/can load)**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	07/09/2024	**Fuel**	Gasoline
Fuel Batch ID	28637	**Fuel Calibration Number**	1
Vehicle Class	LDV/Passenger Car	**DF Type**	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3298	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	376.8093872	--
FE BAG 1 (Bag 1 Fuel Economy)	999	--
CO2 BAG 2 (Bag 2 Carbon Dioxide)	368.5942383	--
FE BAG 2 (Bag 2 Fuel Economy)	999	--
CO2 BAG 3 (Bag 3 Carbon Dioxide)	333.3748779	--
FE BAG 3 (Bag 3 Fuel Economy)	999	--
CO2 BAG 4 (Bag 4 Carbon Dioxide)	359.3591003	--
FE BAG 4 (Bag 4 Fuel Economy)	999	--
METHANE (CH4 - Methane)	0.0018964	--
CO (Carbon Monoxide)	0.1963917	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.9937706	--
DT-EER (Drive Trace Energy Economy Rating)	0.7954024	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	2.2782574	--
MFR FE (Manufacturer Fuel Economy)	999	--
NOX (Nitrogen Oxide)	0.0025219	--
N2O (Nitrous Oxide)	0.000137	--
HC-NM (Non-methane Hydrocarbon)	0.0044521	--
NMOG (Non-methane organic gases)	0.00489	--
PM (Particulate Matter)	0.0000398	--
HC-TOTAL (Total Hydrocarbon)	0.0062489	--

Certification Summary Information Report

Test Group	VBMXV02.0B4P	Evaporative/Refueling Family	VBMXR0150G60

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

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	357.8973083	--

Manufacturer Test Comments None Unrounded Result for the following test results were modified by Verify: FE BAG 3, FE BAG 2, FE BAG 4, FE BAG 1, MFR FE

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	120,000 miles	Federal Tier 3 Bin 20	CREE	999	--	--	--	0.4	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 20	CO	0.20	--	--	--	0.29	--	0.5	1.0	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	NMOG	0.0049	--	1.10	--	0.0025	--	0.007	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	NMOG+NOX	0.0074	--	--	--	--	--	0.012	0.020	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	NOX	0.0025	--	--	--	0.0020	--	0.004	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	PM	0.0000	--	--	--	0.0001	--	0.000	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	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Test #	**SBMX10086055**	**Test Procedure**	**3 - HWFE**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/12/2024	**Fuel**	Gasoline
Fuel Batch ID	T10/87	**Fuel Calibration Number**	43
Vehicle Class	LDV/Passenger Car	**DF Type**	Mfr. Determined
Verify Test Lab ID	EETZ Emissions Lab		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4381	**Odometer Units**	K
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.00133	--
CO (Carbon Monoxide)	0.0203	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-4.593	--
DT-EER (Drive Trace Energy Economy Rating)	-1.005	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-5.071	--
MFR FE (Manufacturer Fuel Economy)	35.6	35.6
NOX (Nitrogen Oxide)	0.00133	--
HC-NM (Non-methane Hydrocarbon)	0.00119	--
NMOG (Non-methane organic gases)	0.00123	--
HC-TOTAL (Total Hydrocarbon)	0.00247	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	243	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	243.0778	--

Manufacturer Test Comments 02_HWFET_9T75002_00_EDV_X3 xDrive30i_A_ETW-4500_RG30_S-Sport_S_off

Certification Summary Information Report

Test Group VBMXV02.0B4P **Evaporative/Refueling Family** VBMXR0150G60

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 20	CREE	999	--	--	--	0.4	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 20	NMOG	0.0012	--	1.03	--	0.0025	--	0.004	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	NMOG+NOX	0.0025	--	--	--	--	--	0.007	0.020	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	NOX	0.0013	--	--	--	0.0020	--	0.003	999.999	Pass

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

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Test #	**SBMX91005972**	**Test Procedure**	**3 - HWFE**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	07/09/2024	**Fuel**	Gasoline
Fuel Batch ID	28637	**Fuel Calibration Number**	1
Vehicle Class	LDV/Passenger Car	**DF Type**	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3314	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.0020712	--
CO (Carbon Monoxide)	0.0128928	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	4.5150371	--
DT-EER (Drive Trace Energy Economy Rating)	0.2275137	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	6.1843071	--
MFR FE (Manufacturer Fuel Economy)	34.1077385	--
NOX (Nitrogen Oxide)	0.0018506	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0.0009595	--
NMOG (Non-methane organic gases)	0.0009883	--
HC-TOTAL (Total Hydrocarbon)	0.0030017	--

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

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	254.2111816	--

Manufacturer Test Comments None

Certification Summary Information Report

Test Group VBMXV02.0B4P **Evaporative/Refueling Family** VBMXR0150G60

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 20	CREE	999	--	--	--	0.4	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 20	NMOG	0.0010	--	1.03	--	0.0025	--	0.004	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	NMOG+NOX	0.0029	--	--	--	--	--	0.007	0.020	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	NOX	0.0019	--	--	--	0.0020	--	0.004	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	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Test #	**SBMX10086057**	**Test Procedure**	**90 - US06**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/19/2024	**Fuel**	Gasoline
Fuel Batch ID	T10/87	**Fuel Calibration Number**	43
Vehicle Class	LDV/Passenger Car	**DF Type**	Mfr. Determined
Verify Test Lab ID	EETZ Emissions Lab		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4507	**Odometer Units**	K
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	519.2709	--
FE BAG 1 (Bag 1 Fuel Economy)	16.7	16.7
CO2 BAG 2 (Bag 2 Carbon Dioxide)	298.444	--
FE BAG 2 (Bag 2 Fuel Economy)	29	29
METHANE (CH4 - Methane)	0.00115	--
CO (Carbon Monoxide)	0.058	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.607	--
DT-EER (Drive Trace Energy Economy Rating)	0.542	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.568	--
MFR FE (Manufacturer Fuel Economy)	24.9	24.9
NOX (Nitrogen Oxide)	0.00917	--
HC-NM (Non-methane Hydrocarbon)	0.00103	--
NMOG (Non-methane organic gases)	0.00106	--
PM (Particulate Matter)	0.000738	--
HC-TOTAL (Total Hydrocarbon)	0.00212	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	347.4451	--

Manufacturer Test Comments 03_US06_9T75002_00_EDV_X3 xDrive30i_A_ETW-4500_RG30_S-Sport_S_off

Certification Summary Information Report

Test Group VBMXV02.0B4P **Evaporative/Refueling Family** VBMXR0150G60

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 20	CO	0.0580	--	--	--	0.29	--	0.348	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	NMOG	0.0011	--	1.03	--	0.0025	--	0.004	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	NOX	0.0092	--	--	--	0.0020	--	0.011	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	PM	0.0007	--	--	--	0.0001	--	0.001	0.006	Pass

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Test #	**SBMX91005971**	**Test Procedure**	**90 - US06**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	07/09/2024	**Fuel**	Gasoline
Fuel Batch ID	28637	**Fuel Calibration Number**	1
Vehicle Class	LDV/Passenger Car	**DF Type**	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3334	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	526.244873	--
FE BAG 1 (Bag 1 Fuel Economy)	999	--
CO2 BAG 2 (Bag 2 Carbon Dioxide)	290.753418	--
FE BAG 2 (Bag 2 Fuel Economy)	999	--
METHANE (CH4 - Methane)	0.002886	--
CO (Carbon Monoxide)	0.0377727	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-3.1924205	--
DT-EER (Drive Trace Energy Economy Rating)	-1.0883708	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-6.0652189	--
MFR FE (Manufacturer Fuel Economy)	999	--
NOX (Nitrogen Oxide)	0.0085737	--
N2O (Nitrous Oxide)	0.00004	--
HC-NM (Non-methane Hydrocarbon)	0.002129	--
NMOG (Non-methane organic gases)	0.0021929	--
PM (Particulate Matter)	0.0001806	--
HC-TOTAL (Total Hydrocarbon)	0.0049746	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	343.1314087	--

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

Certification Summary Information Report

Test Group VBMXV02.0B4P **Evaporative/Refueling Family** VBMXR0150G60

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 20	CO	0.0378	--	--	--	0.29	--	0.328	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	NMOG	0.0022	--	1.03	--	0.0025	--	0.005	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	NOX	0.0086	--	--	--	0.0020	--	0.011	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	PM	0.0002	--	--	--	0.0001	--	0.000	0.006	Pass

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Test #	**SBMX10086058**	**Test Procedure**	**95 - SC03**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/11/2024	**Fuel**	Gasoline
Fuel Batch ID	T10/87	**Fuel Calibration Number**	43
Vehicle Class	LDV/Passenger Car	**DF Type**	Mfr. Determined
Verify Test Lab ID	EETZ Emissions Lab		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4326	**Odometer Units**	K
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.00343	--
CO (Carbon Monoxide)	0.5602	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.026	--
DT-EER (Drive Trace Energy Economy Rating)	0.098	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.331	--
MFR FE (Manufacturer Fuel Economy)	17.4	17.4
NOX (Nitrogen Oxide)	0.00457	--
HC-NM (Non-methane Hydrocarbon)	0.00076	--
NMOG (Non-methane organic gases)	0.00079	--
HC-TOTAL (Total Hydrocarbon)	0.00411	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	496.2927	--

Manufacturer Test Comments 04_SC03_9T75002_00_EDV_X3 xDrive30i_A_ETW-4500_RG30_S-Sport_S_off

Certification Summary Information Report

Test Group VBMXV02.0B4P **Evaporative/Refueling Family** VBMXR0150G60

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 20	CO	0.5602	--	--	--	0.29	--	0.850	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	NMOG	0.0008	--	1.03	--	0.0025	--	0.003	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	NOX	0.0046	--	--	--	0.0020	--	0.007	999.999	Pass

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Emission Data Vehicle Information

Vehicle ID / Configuration	9T75002 / 3	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	SBMXJ02.0B4P	**Original Evaporative/Refueling Family**	SBMXR0150G60
Original Test Vehicle Model Year	2025		

Vehicle Model

Represented Test Vehicle Make	BMW	**Represented Test Vehicle Model**	X3 xDrive30i

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
2	Electric Motor	Electricity

Hybrid Indicator	Yes		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	No	**Rechargeable Energy Storage System Indicator**	Yes
Rechargeable Energy Storage System	Battery(s)	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	No		
Odometer Correction -- Initial	1	**Odometer Correction Factor**	1
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Miles		
Engine Code	B48B20O2G45X	**Rated Horsepower**	255
Displacement (liters)	2		
Air Aspiration Method	Turbocharged	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	1	**Air Aspiration Device Configuration**	Single
Charge Air Cooler Type	Air	**Drive Mode While Testing**	All Wheel Drive
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	4176	**Equivalent Test Weight (pounds)**	4500
GVWR (lbs)	5512	**N/V Ratio**	26.2
Axle Ratio	3.38		
Transmission Type	Semi-Automatic	**# of Transmission Gears**	8
Transmission Lockup	Yes	**Creeper Gear**	No

Dynamometer Coefficients:

	Target Coefficients			Set Coefficients			
Coefficient Category	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients**
City/Highway/Evap	44.2	0.118	0.02238	13	0.115	0.01961	14.1

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Emission Control Device Comments	--
Manufacturer Test Vehicle Comments	vi_9T75002_03_FEDV_X3 xDrive30i_A_ETW-4500_RG33_default mode_D_on

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Test #	**SBMX10086054**	**Test Procedure**	**31 - Federal fuel 3-day exhaust**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	61 - Tier 2 Cert Gasoline
Test Date	03/21/2024	**Fuel**	Gasoline
Fuel Batch ID	T2/E0	**Fuel Calibration Number**	53
Vehicle Class	LDV/Passenger Car	**DF Type**	Mfr. Determined
Verify Test Lab ID	EETZ Emissions Lab		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4594	**Odometer Units**	K
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	309.7929	--
FE BAG 1 (Bag 1 Fuel Economy)	28.1	28.1
CO2 BAG 2 (Bag 2 Carbon Dioxide)	244.2831	--
FE BAG 2 (Bag 2 Fuel Economy)	35.7	35.7
CO2 BAG 3 (Bag 3 Carbon Dioxide)	283.5689	--
FE BAG 3 (Bag 3 Fuel Economy)	30.7	30.7
CO2 BAG 4 (Bag 4 Carbon Dioxide)	242.123	--
FE BAG 4 (Bag 4 Fuel Economy)	36.1	36.1
METHANE (CH4 - Methane)	0.00172	--
CO (Carbon Monoxide)	0.3537	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.351	--
DT-EER (Drive Trace Energy Economy Rating)	-0.378	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.389	--
MFR FE (Manufacturer Fuel Economy)	32.5	32.5
NOX (Nitrogen Oxide)	0.00124	--
N2O (Nitrous Oxide)	0.00003	--
HC-NM (Non-methane Hydrocarbon)	0.00542	--
NMOG (Non-methane organic gases)	0.00563	--
HC-TOTAL (Total Hydrocarbon)	0.00706	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	269	269

Certification Summary Information Report

Test Group VBMXV02.0B4P **Evaporative/Refueling Family** VBMXR0150G60

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	268.0167	--

Manufacturer Test Comments 01_FTP_9T75002_03_FEDV_X3 xDrive30i_A_ETW-4500_RG33_default mode_D_on

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	120,000 miles	Federal Tier 3 Bin 20	CREE	269	--	--	--	0.4	--	269	--	--
Fed	150,000 miles	Federal Tier 3 Bin 20	CO	0.35	--	--	--	0.29	--	0.6	1.0	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	NMOG	0.0056	--	1.10	--	0.0025	--	0.008	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	NMOG+NOX	0.0068	--	--	--	--	--	0.011	0.020	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	NOX	0.0012	--	--	--	0.0020	--	0.003	999.999	Pass

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

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Test #	**SBMX10086053**	**Test Procedure**	**3 - HWFE**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	61 - Tier 2 Cert Gasoline
Test Date	03/21/2024	**Fuel**	Gasoline
Fuel Batch ID	T2/E0	**Fuel Calibration Number**	53
Vehicle Class	LDV/Passenger Car	**DF Type**	Mfr. Determined
Verify Test Lab ID	EETZ Emissions Lab		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4618	**Odometer Units**	K
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.0002	--
CO (Carbon Monoxide)	0.1596	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.181	--
DT-EER (Drive Trace Energy Economy Rating)	-0.392	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.3	--
MFR FE (Manufacturer Fuel Economy)	44.1	44.1
NOX (Nitrogen Oxide)	0.00092	--
HC-NM (Non-methane Hydrocarbon)	0.0001	--
NMOG (Non-methane organic gases)	0.00011	--
HC-TOTAL (Total Hydrocarbon)	0.0003	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	198	198

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	198.1184	--

Manufacturer Test Comments 02_HWFET_9T75002_03_FEDV_X3 xDrive30i_A_ETW-4500_RG33_default mode_D_on

Certification Summary Information Report

Test Group VBMXV02.0B4P **Evaporative/Refueling Family** VBMXR0150G60

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal Tier 3 Bin 20	CREE	198	--	--	--	0.4	--	198	--	--
Fed	150,000 miles	Federal Tier 3 Bin 20	NMOG	0.0001	--	1.03	--	0.0025	--	0.003	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	NMOG+NOX	0.0010	--	--	--	--	--	0.006	0.020	Pass
Fed	150,000 miles	Federal Tier 3 Bin 20	NOX	0.0009	--	--	--	0.0020	--	0.003	999.999	Pass

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

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Emission Data Vehicle Information

Vehicle ID / Configuration	9T75018 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	SBMXJ02.0B4P	**Original Evaporative/Refueling Family**	SBMXR0150G60
Original Test Vehicle Model Year	2025		

Vehicle Model

Represented Test Vehicle Make	BMW	**Represented Test Vehicle Model**	X3 xDrive30i

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
2	Electric Motor	Electricity

Hybrid Indicator	Yes		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	No	**Rechargeable Energy Storage System Indicator**	Yes
Rechargeable Energy Storage System	Battery(s)	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	No		
Odometer Correction -- Initial	1	**Odometer Correction Factor**	1
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Miles		
Engine Code	B48B20O2G45X	**Rated Horsepower**	255
Displacement (liters)	2		
Air Aspiration Method	Turbocharged	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	1	**Air Aspiration Device Configuration**	Single
Charge Air Cooler Type	Air	**Drive Mode While Testing**	All Wheel Drive
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	4176	**Equivalent Test Weight (pounds)**	4500
GVWR (lbs)	5512	**N/V Ratio**	26.2
Axle Ratio	3.38		
Transmission Type	Semi-Automatic	**# of Transmission Gears**	8
Transmission Lockup	Yes	**Creeper Gear**	No

Dynamometer Coefficients:

	Target Coefficients			Set Coefficients			
Coefficient Category	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients**
City/Highway/Evap	44.2	0.118	0.02266	12.8	0.122	0.02015	14.2

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Emission Control Device Comments --

Manufacturer Test Vehicle Comments vi_9T75018_00_EVAP EDV_X3 xDrive30i_A_ETW-4500_RG30_E10

Test #	**SBMX10085517**	**Test Procedure**	**23 - 2-day evap**
Exhaust Test # for this Evap Test	SBMX10085514	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	02/13/2024	**Fuel**	Gasoline
Fuel Batch ID	T10/87	**Fuel Calibration Number**	39
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	EETZ Emissions Lab		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	3552	**Odometer Units**	K
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
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 (Total Hydrocarbon)	0.16206	--
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.17502	--

Manufacturer Test Comments EVAP EDV - 2Day, X3 xDrive30i

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	0.1750	0.0000	0.175	0.300	Pass

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Test #	**SBMX10085519**	**Test Procedure**	**34 - Federal fuel 3-day evap**
Exhaust Test # for this Evap Test	SBMX10085515	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	02/29/2024	**Fuel**	Gasoline
Fuel Batch ID	T10/87	**Fuel Calibration Number**	43
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	EETZ Emissions Lab		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	3669	**Odometer Units**	K
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
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 (Total Hydrocarbon)	0.21303	--
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.23007	--

Manufacturer Test Comments EVAP EDV - 3Day, X3 xDrive30i

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	0.2301	0.0000	0.230	0.300	Pass

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Test #	**SBMX10085522**	**Test Procedure**	**32 - Federal Fuel Running Loss**
Exhaust Test # for this Evap Test	SBMX10085515	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	02/29/2024	**Fuel**	Gasoline
Fuel Batch ID	T10/87	**Fuel Calibration Number**	43
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	EETZ Emissions Lab		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	3641	**Odometer Units**	K
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
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 (Hydrocarbon for Running Loss and ORVR)	0.0002	--
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0002	--

Manufacturer Test Comments EVAP EDV - Running Loss, X3 xDrive30i

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	0.000	0.000	0.00	0.05	Pass

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Test #	**SBMX10085523**	**Test Procedure**	**24 - Federal fuel refueling test (ORVR)**
Exhaust Test # for this Evap Test	SBMX10085516	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	02/22/2024	**Fuel**	Gasoline
Fuel Batch ID	T10/87	**Fuel Calibration Number**	39
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	EETZ Emissions Lab		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	3611	**Odometer Units**	K
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
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 (Hydrocarbon for Running Loss and ORVR)	0.03314	--

Manufacturer Test Comments EVAP EDV - ORVR, X3 xDrive30i

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	0.033	0.000	0.03	0.20	Pass

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Test #	**SBMX10085524**	**Test Procedure**	**65 - Evap Canister Bleed Test**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/13/2024	**Fuel**	Gasoline
Fuel Batch ID	T10/87	**Fuel Calibration Number**	43
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	EETZ Emissions Lab		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	3712	**Odometer Units**	K
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
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 (Total Hydrocarbon)	0.0088	--
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0095	--

Manufacturer Test Comments EVAP EDV - Bleed Test, X3 xDrive30i

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	0.0095	0.0000	0.010	0.020	Pass

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Test #	**SBMX10085525**	**Test Procedure**	**67 - Leak Test - Port Near Canister**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/12/2024	**Fuel**	Gasoline
Fuel Batch ID	T10/87	**Fuel Calibration Number**	43
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	EETZ Emissions Lab		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3687	**Odometer Units**	K
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	No		
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
LEAK-DIA (Effective Leak Diameter (inches))	0	--

Manufacturer Test Comments EVAP EDV - Leak Test, X3 xDrive30i

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	0.000	0.000	0.00	0.02	Pass

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Fuel Properties

Fuel Batch ID	**T10/87**	**Fuel Calibration Number**	**43**
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	11/27/2023
Fuel Batch Calibration Effective Date	02/27/2024	**Fuel Batch Calibration Ineffective Date**	--
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	0.827	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.746
Fuel Ethanol Volume Percent (%)	9.8	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17962
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.827	**Weight Fraction CO2**	--

Fuel Batch ID	**T2/E0**	**Fuel Calibration Number**	**53**
Test Fuel Type	61 - Tier 2 Cert Gasoline	**Fuel Batch Calibration Date**	02/21/2024
Fuel Batch Calibration Effective Date	02/27/2024	**Fuel Batch Calibration Ineffective Date**	--
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	0.861	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.736
Fuel Ethanol Volume Percent (%)	--	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	18732
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.861	**Weight Fraction CO2**	--

Fuel Batch ID	**28637**	**Fuel Calibration Number**	**1**
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	08/26/2021
Fuel Batch Calibration Effective Date	08/26/2021	**Fuel Batch Calibration Ineffective Date**	--
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	--	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.75
Fuel Ethanol Volume Percent (%)	9.6	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17894
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.825	**Weight Fraction CO2**	--

Fuel Batch ID	**T10/87**	**Fuel Calibration Number**	**39**
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	08/25/2023
Fuel Batch Calibration Effective Date	11/09/2023	**Fuel Batch Calibration Ineffective Date**	--

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	0.826	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.742
Fuel Ethanol Volume Percent (%)	9.6	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	18000
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.826	**Weight Fraction CO2**	--
Fuel Batch ID	**COE10**	**Fuel Calibration Number**	**41**
Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)	**Fuel Batch Calibration Date**	11/14/2023
Fuel Batch Calibration Effective Date	11/14/2023	**Fuel Batch Calibration Ineffective Date**	--
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	0.826	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.743
Fuel Ethanol Volume Percent (%)	10	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17949
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.826	**Weight Fraction CO2**	--

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

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 20
Fuel	Gasoline	**Test Procedure**	Federal fuel 3-day exhaust

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
120,000 miles	CREE	--	--	--	--	--	--	0.4	999
150,000 miles	CO	--	--	--	0.0000	--	--	0.29	1.0
150,000 miles	CO-COMP	--	--	--	--	--	--	--	4.2
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	NMOG	--	--	1.10	0.0000	--	--	0.0025	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.020
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	--	0.040
150,000 miles	NOX	--	--	--	0.0000	--	--	0.0020	999.999
150,000 miles	PM	--	--	--	0.0000	--	--	0.0001	0.003

Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	LDV/Passenger Car	**Standard Level**	Federal Tier 3 Bin 20
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	--	--	--	0.0000	--	--	0.29	999.999
150,000 miles	NMOG	--	--	1.03	0.0000	--	--	0.0025	999.999
150,000 miles	NOX	--	--	--	0.0000	--	--	0.0020	999.999
150,000 miles	PM	--	--	--	0.0000	--	--	0.0001	0.006

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60
Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	LDV/Passenger Car	**Standard Level**	Federal Tier 3 Bin 20
Fuel	Gasoline	**Test Procedure**	Federal fuel 2-day exhaust (w/can load)

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
120,000 miles	CREE	--	--	--	--	--	--	0.4	999
150,000 miles	CO	--	--	--	0.0000	--	--	0.29	1.0
150,000 miles	CO-COMP	--	--	--	--	--	--	--	4.2
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	NMOG	--	--	1.10	0.0000	--	--	0.0025	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.020
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	--	0.040
150,000 miles	NOX	--	--	--	0.0000	--	--	0.0020	999.999
150,000 miles	PM	--	--	--	0.0000	--	--	0.0001	0.003

Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	LDV/Passenger Car	**Standard Level**	Federal Tier 3 Bin 20
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	--	--	--	0.0000	--	--	0.09	10.0
120,000 miles	HC-NM	--	--	--	--	--	--	0.00	0.3

Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	LDV/Passenger Car	**Standard Level**	Federal Tier 3 Bin 20
Fuel	Gasoline	**Test Procedure**	HWFE

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
120,000 miles	CREE	--	--	--	--	--	--	0.4	999
150,000 miles	NMOG	--	--	1.03	0.0000	--	--	0.0025	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.020
150,000 miles	NOX	--	--	--	0.0000	--	--	0.0020	999.999

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60
Cert Region	Federal	**Cert/In-Use Code**	Cert
Vehicle Class	LDV/Passenger Car	**Standard Level**	Federal Tier 3 Bin 20
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	--	--	--	0.0000	--	--	0.29	999.999
150,000 miles	NMOG	--	--	1.03	0.0000	--	--	0.0025	999.999
150,000 miles	NOX	--	--	--	0.0000	--	--	0.0020	999.999

Evaporative/Refueling Standards

Evaporative/Refueling Family	VBMXR0150G60	**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	--	0.300	0.0000

Evaporative/Refueling Family	VBMXR0150G60	**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	--	0.20	0.000

Evaporative/Refueling Family	VBMXR0150G60	**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	--	0.020	0.0000

Evaporative/Refueling Family	VBMXR0150G60	**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	--	0.300	0.0000

Certification Summary Information Report

Test Group	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60

Evaporative/Refueling Family	VBMXR0150G60	**Cert Region**	Federal
Cert/In-Use Code	Cert	**Standard Level**	Federal Tier 3 Evap
Test Procedure	Leak Test - Port Near Canister		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	LEAK-DIA	--	0.02	0.000

Evaporative/Refueling Family	VBMXR0150G60	**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

Certification Summary Information Report

Test Group	VBMXV02.0B4P	Evaporative/Refueling Family	VBMXR0150G60

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	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60
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	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60
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	VBMXV02.0B4P	**Evaporative/Refueling Family**	VBMXR0150G60
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