

**Certification Summary Information Report**

<b>Manufacturer</b>	BMW	<b>Manufacturer Code</b>	BMX
<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
<b>Certificate Number</b>	VBMXV02.0B4P-002	<b>CARB Executive Order #</b>	--
<b>Certificate Issue Date</b>	01/27/2026	<b>Certificate Revision Date</b>	--
<b>Certificate Effective Date</b>	01/27/2026	<b>Conditional Certificate</b>	No
<b>CSI Revision #</b>	--	<b>CSI Submission/Revision Date</b>	01/19/2026 09:04:22 AM
<b>Model Year</b>	2027		

## Certification Summary Information Report

Test Group	VBMXV02.0B4P	Evaporative/Refueling Family	VBMXR0150G60
<b>Test Group Information</b>			
CSI Type	Update for Correction	Running Change Reference Number	--
GHG Exempt Status	Not Exempt		
<b>Drive Sources and Fuel(s)</b>			
Drive Source #1:	Electric Motor		
	<b>Fuel</b>	<b>Basic Fuel Metering System</b>	<b>Lean Burn Strategy Indicator</b>
	Electricity	--	--
Drive Source #2:	Combustion Engine		
	<b>Fuel</b>	<b>Basic Fuel Metering System</b>	<b>Lean Burn Strategy Indicator</b>
	Gasoline	Spark Ignition direct & ported injection	No
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?	No
Independent Commercial Importer?	No	Alternative Fuel Converter Certificate?	No
SFTP Federal Composite Compliance Identifier	Tier 3	SFTP Tier 2 Composite CO Option	--
SFTP LEV-III Composite Compliance Indicator	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		
Mfr Test Group Comments	--		
Mfr Exhaust / Evap Standards Comments	--		

## Certification Summary Information Report

<b>Test Group</b>	VBMXV02.0B4P		<b>Evaporative/Refueling Family</b>	VBMXR0150G60			
<b>Evaporative/Refueling Family Information</b>							
<b>Evaporative Summary Information Type</b>	New	<b>Submission/Correction Date</b>	10/07/2025 07:55:49 AM				
<b>Integrated ORVR?</b>	Yes	<b>Fuel(s)</b>	Gasoline				
<b>Multiple Fuel Storage</b>	--						
<b>Bladder Fuel Tank?</b>	No						
<b>Fuel Tank Material</b>	Plastic	<b>Fuel Tank Material Description</b>	HDPE				
<b>Fill Pipe Seal Type</b>	Liquid seal						
<b>Air Intake System Vapor Storage Device?</b>	No	<b>Air Intake System Vapor Storage Device Description</b>	--				
<b>Fuel System Vapor Storage Canister?</b>	Yes	<b>Other Vapor Storage</b>	--				
<b>Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)</b>	150	<b>Number of Primary Canisters</b>	1				
<b>Number of Bleed Canisters</b>	0	<b>Bleed Canister Total Working Capacity (grams)</b>	--				
<b>Mfr Evaporative/Refueling Family Comments</b>	--						
<b>Leak Family Details</b>							
<b>Leak Family Indicator</b>	No						
<b>Canister Bleed Test Indicator</b>	Yes	<b>Applicability of Evaporative Canister Bleed Test</b>	50 State				
<b>Evaporative Canister Bleed Test Comments</b>	--						
<b>CARB Fuel Only (Rig) Test Indicator</b>	No	<b>Applicability of CARB Fuel Only (Rig) Test</b>	--				
<b>CARB Fuel Only (Rig) Test Comments</b>	--						
<b>Models Covered by this Certificate</b>							
<b>Carline Manufacturer</b>	<b>Division</b>	<b>Carline</b>	<b>Certification Region Code(s)</b>	<b>Drive System</b>	<b>Trans - Type</b>	<b>- # of Gears</b>	<b>Trans - Lockup</b>
BMW	1 - BMW	317 - 430i Coupe	Federal	2-Wheel Drive, Rear	Semi-Automatic	8	Yes
BMW	1 - BMW	324 - 430i Convertible	Federal	2-Wheel Drive, Rear	Semi-Automatic	8	Yes
BMW	1 - BMW	325 - 430i xDrive Convertible	Federal	All Wheel Drive	Semi-Automatic	8	Yes
BMW	1 - BMW	318 - 430i xDrive Coupe	Federal	All Wheel Drive	Semi-Automatic	8	Yes
<b>Engine Description</b>							
<b>Hybrid Type</b>	IC Engine/Electric Motor	<b>Hybrid Description</b>	Fuel Economy Guide Category MHEV (Mild Hybrid Electric Vehicle)				
<b>Engine Type</b>	4-Stroke Spark Ignition	<b>Mfr Engine Description</b>	--				
<b>Engine Block Arrangement</b>	Inline	<b>Mfr Engine Block Arrangement Description</b>	--				
<b>Camless Valvetrain Indicator</b>	No	<b>Oil Viscosity/Classification</b>	0W-12				
<b>Number of Cylinders/Rotors</b>	4	<b>Mechanically Variable Compression Ratio Indicator</b>	N				

### Certification Summary Information Report

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60								
<b>After Treatment Device(s) (ATD)</b>											
<b>ATD Number</b>	<b>ATD Type</b>	<b>ATD Precious Metal</b>	<b>Substrate Material</b>								
1	Three-way catalyst	Palladium + Rhodium	Ceramic								
2	Other	Palladium + Rhodium	Ceramic								
<b>Mfr After Treatment Device (ATD) Comments</b>											
		After Treatment Device #2: Gasoline particulate filter (GPF)									
<b>Direct Ozone Reduction (DOR) Device</b>											
		Not Equipped									
<b>Mfr Emission Control Device Comments</b>											
--											
<b>Engine Configuration Number 1</b>											
<b>Engine Displacement (liters)</b>	2.0	<b>Engine Rated Horsepower</b>	255								
<b>Number of Inlet Valves Per Cylinder</b>	2	<b>Number of Exhaust Valves Per Cylinder</b>	2								
<b>Air Aspiration Method</b>	Turbocharged	<b>Number of Air Aspiration Devices</b>	1								
<b>Air Aspiration Device Configuration</b>	Single	<b>Charge Air Cooler Type</b>	Air								
<b>Air Aspiration Drive Method(s)</b>	Mechanical										
<b>Cylinder Deactivation</b>	No										
<b>Cylinder Deactivation Description</b>	--										
<b>Variable Valve Timing</b>	Yes										
<b>Variable Valve Timing System Description</b>	Variable Valve Timing at inlet and outlet valves										
<b>Variable Valve Lift?</b>	Yes										
<b>Variable Valve Lift System Description</b>	Variable Valve Lift at inlet valves and two settings at outlet valves										
<b>Number of Knock Sensors</b>	2	<b>Number of Air/Fuel Sensors</b>	2								
<b>Air/Fuel Sensor # 1 Type</b>	Air fuel	<b>Air/Fuel Sensor # 1 Description</b>	--								
<b>Air/Fuel Sensor # 2 Type</b>	Heated oxygen	<b>Air/Fuel Sensor # 2 Description</b>	--								
<b>Mfr Air/Fuel Sensor Comments</b>	--										
<b>Exhaust Gas Recirculation</b>	No	<b>Cooled Exhaust Gas Recirculation</b>	No								
<b>EGR Type</b>	--	<b>Exhaust Gas Recirculation Description if 'Other'</b>	--								
<b>Closed Loop Air Injection System</b>	No										
<b>Air Injection Type</b>	--	<b>Air Injection Type if 'Other'</b>	--								
<b>Mfr Engine Configuration Comments</b>	--										
<b>Official Test Numbers</b>											
<b>Test Group</b>	<b>Fuel</b>	<b>FTP</b>	<b>US06</b>	<b>SC03</b>	<b>Cold CO</b>	<b>Highway</b>	<b>EPA City Litmus Value</b>	<b>EPA City Litmus Threshold</b>	<b>EPA Highway Litmus Value</b>	<b>EPA Highway Litmus Threshold</b>	<b>CREE Weighting Factor</b>
Gasoline	SBMX10086056	SBMX10086057	SBMX10086058	SBMX10086060	SBMX10086060	SBMX10086055	23.4	228.2	35.2	286.1	--
Electricity	--	--	--	--	--	--	--	--	--	--	--

## Certification Summary Information Report

Test Group	VBMXV02.0B4P		Evaporative/Refueling Family	VBMXR0150G60
<b>SFTP LEV-III Official Test Numbers</b>				
Test Group Fuel	FTP	US06	SC03	
Gasoline	SBMX10086056	SBMX10086057	SBMX10086058	
Gasoline	SBMX91005970	SBMX91005971	SBMX10086058	
<b>Hybrid Electric Vehicle And Fuel Cell Information</b>				
<b>Rechargeable Energy Storage System</b>	Battery(s)	<b>Rechargeable Energy Storage System, if Other</b>	--	
<b>Battery Type</b>	Lithium Ion	<b>Number of Battery Packs</b>	1	
<b>Total Voltage of Battery Packs</b>	44	<b>Battery Energy Capacity</b>	10	
<b>Battery Specific Energy</b>	40	<b>Battery Charger Type</b>	On-Board	
<b>Number of Capacitors</b>	--	<b>Capacitor Rating (In Farads)</b>	--	
<b>Mfr Capacitor Comments</b>	--			
<b>Hydraulic System Description</b>	--			
<b>Regenerative Braking Type</b>	Electrical Regen Brake	<b>Driver Controlled Regenerative Braking</b>	No	
<b>Regenerative Braking Source</b>	Both			
<b>Mfr Regenerative Braking Description</b>	--			
<b>Drive Motor(s)/Generator(s)</b>	1	<b>Rated Motor/Generator Power</b>	8	
<b>Motor/Generator Type 1</b>	EESM			
<b>Mfr Fuel Cell Description</b>	--	<b>Usable H2 Fill Capacity (kg)</b>	--	
<b>Fuel Cell On-Board H2 Storage Capacity (kg)</b>	--			
<b>Mfr Hybrid Electric/ Electric Vehicle Comments</b>	430i Convertible, 430i Coupe, 430i xDrive Convertible 430i xDrive 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 synchronous machine (EESM)			



## Certification Summary Information Report

Test Group		VBMXV02.0B4P			Evaporative/Refueling Family			VBMXR0150G60
<b>Dynamometer Coefficients:</b>								
		Target Coefficients			Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)		
City/Highway/Evap	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

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
<b>Test #</b>	<b>SBMX10086056</b>	<b>Test Procedure</b>	<b>31 - Federal fuel 3-day exhaust</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	03/12/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	T10/87	<b>Fuel Calibration Number</b>	43
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	EETZ Emissions Lab		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	4356	<b>Odometer Units</b>	K
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	Yes		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	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

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
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<b>Test Result Name</b>	<b>Unrounded Test Result</b>	<b>Verify Calculated CREE/OPT-CREE</b>
Carbon-Related Exhaust Emissions	348	999

<b>Test Result Name</b>	<b>Unrounded Test Result</b>	<b>Verify Calculated CO2</b>
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/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Other	CREE	999	--	--	--	0.4	--	999	--	--
Fed	120,000 miles	Other	METHANE	0.0009	--	--	--	0.0006	--	0.002	0.030	Pass
Fed	120,000 miles	Other	N2O	0.0003	--	--	--	0.0004	--	0.001	0.010	Pass
Fed	150,000 miles	Other	CO	0.15	--	--	--	0.29	--	0.4	1.0	Pass
Fed	150,000 miles	Other	CO-COMP	0.57	--	--	--	--	--	0.6	4.2	Pass
Fed	150,000 miles	Other	NMOG	0.0037	--	1.1	--	0.0025	--	0.006	999.999	Pass
Fed	150,000 miles	Other	NMOG+NOX	0.0073	--	--	--	--	--	0.012	0.020	Pass
Fed	150,000 miles	Other	NMOG+NOX-COMP	0.0119	--	--	--	--	--	0.012	0.040	Pass
Fed	150,000 miles	Other	NOX	0.0036	--	--	--	0.002	--	0.006	999.999	Pass
Fed	150,000 miles	Other	PM	0.0002	--	--	--	0.0001	--	0	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

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
<b>Test #</b>	<b>SBMX10086059</b>	<b>Test Procedure</b>	<b>52 - Fed. fuel 50 F exh.</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	03/14/2024	<b>Fuel</b>	N/A
<b>Fuel Batch ID</b>	T10/87	<b>Fuel Calibration Number</b>	43
<b>Vehicle Class</b>	N/A	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	EETZ Emissions Lab		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	4452	<b>Odometer Units</b>	K
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	Yes		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	Yes

## Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
<b>CO2 BAG 1 (Bag 1 Carbon Dioxide)</b>	423.8371	--
<b>FE BAG 1 (Bag 1 Fuel Economy)</b>	20.4	20.4
<b>CO2 BAG 2 (Bag 2 Carbon Dioxide)</b>	388.1857	--
<b>FE BAG 2 (Bag 2 Fuel Economy)</b>	22.3	22.3
<b>CO2 BAG 3 (Bag 3 Carbon Dioxide)</b>	344.5156	--
<b>FE BAG 3 (Bag 3 Fuel Economy)</b>	25.1	25.1
<b>METHANE (CH4 - Methane)</b>	0.00077	--
<b>CO (Carbon Monoxide)</b>	0.1875	--
<b>DT-ASCR (Drive Trace Absolute Speed Change Rating)</b>	0.41	--
<b>DT-EER (Drive Trace Energy Economy Rating)</b>	0.168	--
<b>DT-IWRR (Drive Trace Inertia Work Ratio Rating)</b>	0.21	--
<b>MFR FE (Manufacturer Fuel Economy)</b>	22.5	22.5
<b>NOX (Nitrogen Oxide)</b>	0.00389	--
<b>HC-NM (Non-methane Hydrocarbon)</b>	0.0042	--
<b>NMOG (Non-methane organic gases)</b>	0.00462	--
<b>HC-TOTAL (Total Hydrocarbon)</b>	0.00494	--

## Manufacturer Test Comments

05\_FTP50°\_9T75002\_00\_EDV\_X3 xDrive30i\_A\_ETW-4500\_RG30\_S-Sport\_S\_off

## Certification Summary Information Report

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
<b>Test #</b>	<b>SBMX10086060</b>	<b>Test Procedure</b>	<b>11 - Cold CO</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	28 - Cold CO E10 Regular Gasoline (Tier 3)
<b>Test Date</b>	03/08/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	COE10	<b>Fuel Calibration Number</b>	41
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	EETZ Emissions Lab		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	2677	<b>Odometer Units</b>	K
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	Yes		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	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	Other	CO	0.42	--	--	--	0.09	--	0.5	10.0	Pass
Fed	120,000 miles	Other	HC-NM	0.01	--	--	--	0	--	0	0.3	Pass

## Certification Summary Information Report

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
<b>Test #</b>	<b>SBMX91005970</b>	<b>Test Procedure</b>	<b>21 - Federal fuel 2-day exhaust (w/can load)</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	07/09/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	28637	<b>Fuel Calibration Number</b>	1
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	--		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	3298	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	Yes		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	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

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
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<b>Test Result Name</b>	<b>Unrounded Test Result</b>	<b>Verify Calculated CREE/OPT-CREE</b>
Carbon-Related Exhaust Emissions	9999.9999999	999

<b>Test Result Name</b>	<b>Unrounded Test Result</b>	<b>Verify Calculated CO2</b>
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/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Other	CREE	999	--	--	--	0.4	--	999	--	--
Fed	120,000 miles	Other	METHANE	0.0019	--	--	--	0.0006	--	0.002	0.030	Pass
Fed	120,000 miles	Other	N2O	0.0001	--	--	--	0.0004	--	0	0.010	Pass
Fed	150,000 miles	Other	CO	0.2	--	--	--	0.29	--	0.5	1.0	Pass
Fed	150,000 miles	Other	NMOG	0.0049	--	1.1	--	0.0025	--	0.007	999.999	Pass
Fed	150,000 miles	Other	NMOG+NOX	0.0074	--	--	--	--	--	0.012	0.020	Pass
Fed	150,000 miles	Other	NOX	0.0025	--	--	--	0.002	--	0.004	999.999	Pass
Fed	150,000 miles	Other	PM	0	--	--	--	0.0001	--	0	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

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
<b>Test #</b>	<b>SBMX10086055</b>	<b>Test Procedure</b>	<b>3 - HWFE</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	03/12/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	T10/87	<b>Fuel Calibration Number</b>	43
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	EETZ Emissions Lab		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	4381	<b>Odometer Units</b>	K
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	Yes		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	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	Other	CREE	999	--	--	--	0.4	--	999	--	--
Fed	150,000 miles	Other	NMOG	0.0012	--	1.03	--	0.0025	--	0.004	999.999	Pass
Fed	150,000 miles	Other	NMOG+NOX	0.0025	--	--	--	--	--	0.007	0.020	Pass
Fed	150,000 miles	Other	NOX	0.0013	--	--	--	0.002	--	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

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
<b>Test #</b>	<b>SBMX91005972</b>	<b>Test Procedure</b>	<b>3 - HWFE</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	07/09/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	28637	<b>Fuel Calibration Number</b>	1
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	--		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	3314	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	Yes		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	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	Other	CREE	999	--	--	--	0.4	--	999	--	--
Fed	150,000 miles	Other	NMOG	0.001	--	1.03	--	0.0025	--	0.004	999.999	Pass
Fed	150,000 miles	Other	NMOG+NOX	0.0029	--	--	--	--	--	0.007	0.020	Pass
Fed	150,000 miles	Other	NOX	0.0019	--	--	--	0.002	--	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

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
<b>Test #</b>	<b>SBMX10086057</b>	<b>Test Procedure</b>	<b>90 - US06</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	03/19/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	T10/87	<b>Fuel Calibration Number</b>	43
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	EETZ Emissions Lab		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	4507	<b>Odometer Units</b>	K
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	Yes		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	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

<b>Test Group</b>	VBMXV02.0B4P	Evaporative/Refueling Family	VBMXR0150G60
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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	Other	CO	0.058	--	--	--	0.29	--	0.348	999.999	Pass
Fed	150,000 miles	Other	NMOG	0.0011	--	1.03	--	0.0025	--	0.004	999.999	Pass
Fed	150,000 miles	Other	NOX	0.0092	--	--	--	0.002	--	0.011	999.999	Pass
Fed	150,000 miles	Other	PM	0.0007	--	--	--	0.0001	--	0.001	0.006	Pass

## Certification Summary Information Report

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
<b>Test #</b>	<b>SBMX91005971</b>	<b>Test Procedure</b>	<b>90 - US06</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	07/09/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	28637	<b>Fuel Calibration Number</b>	1
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	--		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	3334	<b>Odometer Units</b>	M
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	Yes		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	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

<b>Test Group</b>	VBMXV02.0B4P	Evaporative/Refueling Family	VBMXR0150G60
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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	Other	CO	0.0378	--	--	--	0.29	--	0.328	999.999	Pass
Fed	150,000 miles	Other	NMOG	0.0022	--	1.03	--	0.0025	--	0.005	999.999	Pass
Fed	150,000 miles	Other	NOX	0.0086	--	--	--	0.002	--	0.011	999.999	Pass
Fed	150,000 miles	Other	PM	0.0002	--	--	--	0.0001	--	0	0.006	Pass

### Certification Summary Information Report

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
<b>Test #</b>	<b>SBMX10086058</b>	<b>Test Procedure</b>	<b>95 - SC03</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	03/11/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	T10/87	<b>Fuel Calibration Number</b>	43
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	EETZ Emissions Lab		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	4326	<b>Odometer Units</b>	K
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	Yes		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	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 Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification		Pass/Fail
										Level	Standard	
Fed	150,000 miles	Other	CO	0.5602	--	--	--	0.29	--	0.85	999.999	Pass
Fed	150,000 miles	Other	NMOG	0.0008	--	1.03	--	0.0025	--	0.003	999.999	Pass
Fed	150,000 miles	Other	NOX	0.0046	--	--	--	0.002	--	0.007	999.999	Pass

### Certification Summary Information Report

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
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**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
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**Leak Family Details**

Leak Family Identifier	--	Leak Family Name	--
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**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 Combustion	--
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	Yes
Fuel Cell Indicator	No	Rechargeable Energy Storage System, if 'Other'	--
Rechargeable Energy Storage System	Battery(s)		
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	B48B2002G45X	Rated Horsepower	255
Displacement (liters)	2	Air Aspiration Method, if 'Other'	
Air Aspiration Method	Turbocharged	Air Aspiration Device Configuration	Single
Number of Air Aspiration Devices	1	Drive Mode While Testing	All Wheel Drive
Charge Air Cooler Type	Air	Aged Emission Components	4,000 (mi)
Shift Indicator Light Usage	Not equipped	Equivalent Test Weight (pounds)	4500
Curb Weight (lbs)	4176	N/V Ratio	26.2
GVWR (lbs)	5512		
Axle Ratio	3.38	# of Transmission Gears	8
Transmission Type	Semi-Automatic	Creeper Gear	No
Transmission Lockup	Yes		

**Dynamometer Coefficients:**

Coefficient Category	Target Coefficients			Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	
<b>City/Highway/Evap</b>	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
<b>Emission Control Device Comments</b>	--		
<b>Manufacturer Test Vehicle Comments</b>	vi_9T75002_03_FEDV_X3 xDrive30i_A_ETW-4500_RG33_default mode_D_on		

## Certification Summary Information Report

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
<b>Test #</b>	<b>SBMX10086054</b>	<b>Test Procedure</b>	<b>31 - Federal fuel 3-day exhaust</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	61 - Tier 2 Cert Gasoline
<b>Test Date</b>	03/21/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	T2/E0	<b>Fuel Calibration Number</b>	53
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	EETZ Emissions Lab		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	4594	<b>Odometer Units</b>	K
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	Yes		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	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

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
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<b>Test Result Name</b>	<b>Unrounded Test Result</b>	<b>Verify Calculated CO2</b>
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/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Other	CREE	269	--	--	--	0.4	--	269	--	--
Fed	120,000 miles	Other	METHANE	0.0017	--	--	--	0.0006	--	0.002	0.030	Pass
Fed	120,000 miles	Other	N2O	0	--	--	--	0.0004	--	0	0.010	Pass
Fed	150,000 miles	Other	CO	0.35	--	--	--	0.29	--	0.6	1.0	Pass
Fed	150,000 miles	Other	NMOG	0.0056	--	1.1	--	0.0025	--	0.008	999.999	Pass
Fed	150,000 miles	Other	NMOG+NOX	0.0068	--	--	--	--	--	0.011	0.020	Pass
Fed	150,000 miles	Other	NOX	0.0012	--	--	--	0.002	--	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

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
<b>Test #</b>	<b>SBMX10086053</b>	<b>Test Procedure</b>	<b>3 - HWFE</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	61 - Tier 2 Cert Gasoline
<b>Test Date</b>	03/21/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	T2/E0	<b>Fuel Calibration Number</b>	53
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	EETZ Emissions Lab		
<b>E10 Evaporative Test Measurement Method</b>	--		
<b>Test Start Odometer Reading</b>	4618	<b>Odometer Units</b>	K
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	Yes		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	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	Other	CREE	198	--	--	--	0.4	--	198	--	--
Fed	150,000 miles	Other	NMOG	0.0001	--	1.03	--	0.0025	--	0.003	999.999	Pass
Fed	150,000 miles	Other	NMOG+NOX	0.001	--	--	--	--	--	0.006	0.020	Pass
Fed	150,000 miles	Other	NOX	0.0009	--	--	--	0.002	--	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

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
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**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
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**Leak Family Details**

Leak Family Identifier	--	Leak Family Name	--
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**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	B48B2002G45X	Rated Horsepower	255
Displacement (liters)	2	Air Aspiration Method, if 'Other'	
Air Aspiration Method	Turbocharged	Air Aspiration Device Configuration	Single
Number of Air Aspiration Devices	1	Drive Mode While Testing	All Wheel Drive
Charge Air Cooler Type	Air	Aged Emission Components	4,000 (mi)
Shift Indicator Light Usage	Not equipped	Equivalent Test Weight (pounds)	4500
Curb Weight (lbs)	4176	N/V Ratio	26.2
GVWR (lbs)	5512		
Axle Ratio	3.38	# of Transmission Gears	8
Transmission Type	Semi-Automatic	Creeper Gear	No
Transmission Lockup	Yes		

**Dynamometer Coefficients:**

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

### Certification Summary Information Report

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
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**Emission Control Device Comments** --  
**Manufacturer Test Vehicle Comments** vi\_9T75018\_00\_EVAP EDV\_X3 xDrive30i\_A\_ETW-4500\_RG30\_E10

<b>Test #</b>	<b>SBMX10085517</b>	<b>Test Procedure</b>	<b>23 - 2-day evap</b>
<b>Exhaust Test # for this Evap Test</b>	SBMX10085514	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	02/13/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	T10/87	<b>Fuel Calibration Number</b>	39
<b>Vehicle Class</b>	N/A	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	EETZ Emissions Lab		
<b>E10 Evaporative Test Measurement Method</b>	Calculated (1.08 x FID Total Hydrocarbons)		
<b>Test Start Odometer Reading</b>	3552	<b>Odometer Units</b>	K
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	No		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	Yes

**Test Results**

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
<b>HC-TOTAL (Total Hydrocarbon)</b>	0.16206	--
<b>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</b>	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	0.175	0	0.175	0.3	Pass

### Certification Summary Information Report

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
<b>Test #</b>	<b>SBMX10085519</b>	<b>Test Procedure</b>	<b>34 - Federal fuel 3-day evap</b>
<b>Exhaust Test # for this Evap Test</b>	SBMX10085515	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	02/29/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	T10/87	<b>Fuel Calibration Number</b>	43
<b>Vehicle Class</b>	N/A	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	EETZ Emissions Lab		
<b>E10 Evaporative Test Measurement Method</b>	Calculated (1.08 x FID Total Hydrocarbons)		
<b>Test Start Odometer Reading</b>	3669	<b>Odometer Units</b>	K
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	No	<b>Road Speed Fan Usage</b>	Yes
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)		

**Test Results**

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
<b>HC-TOTAL (Total Hydrocarbon)</b>	0.21303	--
<b>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</b>	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	0.23	0.3	Pass

### Certification Summary Information Report

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
<b>Test #</b>	<b>SBMX10085522</b>	<b>Test Procedure</b>	<b>32 - Federal Fuel Running Loss</b>
<b>Exhaust Test # for this Evap Test</b>	SBMX10085515	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	02/29/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	T10/87	<b>Fuel Calibration Number</b>	43
<b>Vehicle Class</b>	N/A	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	EETZ Emissions Lab		
<b>E10 Evaporative Test Measurement Method</b>	Calculated (1.08 x FID Total Hydrocarbons)		
<b>Test Start Odometer Reading</b>	3641	<b>Odometer Units</b>	K
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	No		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	Yes

**Test Results**

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
<b>HC (Hydrocarbon for Running Loss and ORVR)</b>	0.0002	--
<b>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</b>	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	0	0	0.05	Pass

### Certification Summary Information Report

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
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<b>Test #</b>	SBMX10085523	<b>Test Procedure</b>	24 - Federal fuel refueling test (ORVR)
<b>Exhaust Test # for this Evap Test</b>	SBMX10085516	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	02/22/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	T10/87	<b>Fuel Calibration Number</b>	39
<b>Vehicle Class</b>	N/A	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	EETZ Emissions Lab		
<b>E10 Evaporative Test Measurement Method</b>	Calculated (1.08 x FID Total Hydrocarbons)		
<b>Test Start Odometer Reading</b>	3611	<b>Odometer Units</b>	K
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	No		
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	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	0.03	0.2	Pass

### Certification Summary Information Report

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
<b>Test #</b>	<b>SBMX10085524</b>	<b>Test Procedure</b>	<b>65 - Evap Canister Bleed Test</b>
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	03/13/2024	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	T10/87	<b>Fuel Calibration Number</b>	43
<b>Vehicle Class</b>	N/A	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	EETZ Emissions Lab		
<b>E10 Evaporative Test Measurement Method</b>	Calculated (1.08 x FID Total Hydrocarbons)		
<b>Test Start Odometer Reading</b>	3712	<b>Odometer Units</b>	K
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--
<b>State of Charge Delta</b>	No	<b>Road Speed Fan Usage</b>	Yes
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)		

**Test Results**

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
<b>HC-TOTAL (Total Hydrocarbon)</b>	0.0088	--
<b>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</b>	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	0.01	0.02	Pass

### Certification Summary Information Report

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60						
<b>Test #</b>	<b>SBMX10085525</b>	<b>Test Procedure</b>	<b>67 - Leak Test - Port Near Canister</b>						
<b>Exhaust Test # for this Evap Test</b>	--	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)						
<b>Test Date</b>	03/12/2024	<b>Fuel</b>	Gasoline						
<b>Fuel Batch ID</b>	T10/87	<b>Fuel Calibration Number</b>	43						
<b>Vehicle Class</b>	N/A	<b>DF Type</b>	Mfr. Determined						
<b>Verify Test Lab ID</b>	EETZ Emissions Lab								
<b>E10 Evaporative Test Measurement Method</b>	--								
<b>Test Start Odometer Reading</b>	3687	<b>Odometer Units</b>	K						
<b>4WD Test Dyno</b>	Yes	<b>Diesel Adjustment Factor Usage</b>	--						
<b>State of Charge Delta</b>	No								
<b>Drive Cycle Speed Tolerance Criteria</b>	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	<b>Road Speed Fan Usage</b>	Yes						
<b>Test Results</b>									
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 35%;">Test Result Name</th> <th style="width: 30%;">Unrounded Test Result</th> <th style="width: 35%;">Verify Calculated FE Equivalent Value</th> </tr> </thead> <tbody> <tr> <td>LEAK-DIA (Effective Leak Diameter (inches))</td> <td style="text-align: center;">0</td> <td style="text-align: center;">--</td> </tr> </tbody> </table>				Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value	LEAK-DIA (Effective Leak Diameter (inches))	0	--
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value							
LEAK-DIA (Effective Leak Diameter (inches))	0	--							
<b>Manufacturer Test Comments</b>	EVAP EDV - Leak Test, X3 xDrive30i								
<b>Certification Summary Table</b>									
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	0	0	0.02	Pass	

## Certification Summary Information Report

Test Group	VBMXV02.0B4P	Evaporative/Refueling Family	VBMXR0150G60
<b>Fuel Properties</b>			
<b>Fuel Batch ID</b>	<b>T10/87</b>	<b>Fuel Calibration Number</b>	<b>43</b>
<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	<b>Fuel Batch Calibration Date</b>	11/27/2023
<b>Fuel Batch Calibration Effective Date</b>	02/27/2024	<b>Fuel Batch Calibration Ineffective Date</b>	--
<b>Carbon Weight Fraction NMHC</b>	--	<b>Carbon Weight Fraction HC</b>	--
<b>Exhaust Carbon Weight Fraction</b>	0.827	<b>Fuel Methanol Volume Fraction</b>	--
<b>Fuel Density (grams/cubic ft)</b>	--	<b>Fuel Specific Gravity</b>	0.746
<b>Fuel Ethanol Volume Percent (%)</b>	9.8	<b>Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)</b>	17962
<b>Fuel Net Heat of Combustion (E10) (MJ/kg)</b>	--	<b>Fuel Carbon Mass Fraction (E10)</b>	--
<b>Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)</b>	0.827	<b>Weight Fraction CO2</b>	--
<b>Fuel Batch ID</b>	<b>28637</b>	<b>Fuel Calibration Number</b>	<b>1</b>
<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	<b>Fuel Batch Calibration Date</b>	08/26/2021
<b>Fuel Batch Calibration Effective Date</b>	08/26/2021	<b>Fuel Batch Calibration Ineffective Date</b>	--
<b>Carbon Weight Fraction NMHC</b>	--	<b>Carbon Weight Fraction HC</b>	--
<b>Exhaust Carbon Weight Fraction</b>	--	<b>Fuel Methanol Volume Fraction</b>	--
<b>Fuel Density (grams/cubic ft)</b>	--	<b>Fuel Specific Gravity</b>	0.75
<b>Fuel Ethanol Volume Percent (%)</b>	9.6	<b>Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)</b>	17894
<b>Fuel Net Heat of Combustion (E10) (MJ/kg)</b>	--	<b>Fuel Carbon Mass Fraction (E10)</b>	--
<b>Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)</b>	0.825	<b>Weight Fraction CO2</b>	--
<b>Fuel Batch ID</b>	<b>T2/E0</b>	<b>Fuel Calibration Number</b>	<b>53</b>
<b>Test Fuel Type</b>	61 - Tier 2 Cert Gasoline	<b>Fuel Batch Calibration Date</b>	02/21/2024
<b>Fuel Batch Calibration Effective Date</b>	02/27/2024	<b>Fuel Batch Calibration Ineffective Date</b>	--
<b>Carbon Weight Fraction NMHC</b>	--	<b>Carbon Weight Fraction HC</b>	--
<b>Exhaust Carbon Weight Fraction</b>	0.861	<b>Fuel Methanol Volume Fraction</b>	--
<b>Fuel Density (grams/cubic ft)</b>	--	<b>Fuel Specific Gravity</b>	0.736
<b>Fuel Ethanol Volume Percent (%)</b>	--	<b>Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)</b>	18732
<b>Fuel Net Heat of Combustion (E10) (MJ/kg)</b>	--	<b>Fuel Carbon Mass Fraction (E10)</b>	--
<b>Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)</b>	0.861	<b>Weight Fraction CO2</b>	--
<b>Fuel Batch ID</b>	<b>COE10</b>	<b>Fuel Calibration Number</b>	<b>41</b>
<b>Test Fuel Type</b>	28 - Cold CO E10 Regular Gasoline (Tier 3)	<b>Fuel Batch Calibration Date</b>	11/14/2023
<b>Fuel Batch Calibration Effective Date</b>	11/14/2023	<b>Fuel Batch Calibration Ineffective Date</b>	--
<b>Carbon Weight Fraction NMHC</b>	--	<b>Carbon Weight Fraction HC</b>	--

## Certification Summary Information Report

Test Group	VBMXV02.0B4P	Evaporative/Refueling Family	VBMXR0150G60
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	--
Fuel Batch ID	<b>T10/87</b>	Fuel Calibration Number	<b>39</b>
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	--
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	--

### Certification Summary Information Report

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
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#### Consolidated List of Standards

**Exhaust Standards**

<b>Cert Region</b>	Federal	<b>Cert/In-Use Code</b>	Cert
<b>Vehicle Class</b>	LDV/Passenger Car	<b>Standard Level</b>	Other
<b>Fuel</b>	Gasoline	<b>Test Procedure</b>	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
120,000 miles	METHANE	--	--	--	--	--	--	0.0006	0.030
120,000 miles	N2O	--	--	--	--	--	--	0.0004	0.010
150,000 miles	CO	--	--	--	0	--	--	0.29	1.0
150,000 miles	CO-COMP	--	--	--	--	--	--	--	4.2
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	NMOG	--	--	1.1	0	--	--	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	--	--	0.002	999.999
150,000 miles	PM	--	--	--	0	--	--	0.0001	0.003

<b>Cert Region</b>	Federal	<b>Cert/In-Use Code</b>	Cert
<b>Vehicle Class</b>	LDV/Passenger Car	<b>Standard Level</b>	Other
<b>Fuel</b>	Gasoline	<b>Test Procedure</b>	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	--	--	0.09	10.0
120,000 miles	HC-NM	--	--	--	--	--	--	0	0.3

### Certification Summary Information Report

<b>Test Group</b>		VBMXV02.0B4P			<b>Evaporative/Refueling Family</b>			VBMXR0150G60		
<b>Cert Region</b>		Federal			<b>Cert/In-Use Code</b>			Cert		
<b>Vehicle Class</b>		LDV/Passenger Car			<b>Standard Level</b>			Other		
<b>Fuel</b>		Gasoline			<b>Test Procedure</b>			Federal fuel 3-day exhaust		
<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>RAF</b>	<b>NMOG / NMHC</b>	<b>Upward Diesel Adjustment Factor</b>	<b>Downward Diesel Adjustment Factor</b>	<b>Mult DF</b>	<b>Add DF</b>	<b>Std</b>	
120,000 miles	CREE	--	--	--	--	--	--	0.4	999	
120,000 miles	METHANE	--	--	--	--	--	--	0.0006	0.030	
120,000 miles	N2O	--	--	--	--	--	--	0.0004	0.010	
150,000 miles	CO	--	--	--	0	--	--	0.29	1.0	
150,000 miles	CO-COMP	--	--	--	--	--	--	--	4.2	
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004	
150,000 miles	NMOG	--	--	1.1	0	--	--	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	--	--	0.002	999.999	
150,000 miles	PM	--	--	--	0	--	--	0.0001	0.003	

<b>Cert Region</b>		Federal			<b>Cert/In-Use Code</b>			Cert		
<b>Vehicle Class</b>		LDV/Passenger Car			<b>Standard Level</b>			Other		
<b>Fuel</b>		Gasoline			<b>Test Procedure</b>			US06		
<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>RAF</b>	<b>NMOG / NMHC</b>	<b>Upward Diesel Adjustment Factor</b>	<b>Downward Diesel Adjustment Factor</b>	<b>Mult DF</b>	<b>Add DF</b>	<b>Std</b>	
150,000 miles	CO	--	--	--	0	--	--	0.29	999.999	
150,000 miles	NMOG	--	--	1.03	0	--	--	0.0025	999.999	
150,000 miles	NOX	--	--	--	0	--	--	0.002	999.999	
150,000 miles	PM	--	--	--	0	--	--	0.0001	0.006	

<b>Cert Region</b>		Federal			<b>Cert/In-Use Code</b>			Cert		
<b>Vehicle Class</b>		LDV/Passenger Car			<b>Standard Level</b>			Other		
<b>Fuel</b>		Gasoline			<b>Test Procedure</b>			SC03		
<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>RAF</b>	<b>NMOG / NMHC</b>	<b>Upward Diesel Adjustment Factor</b>	<b>Downward Diesel Adjustment Factor</b>	<b>Mult DF</b>	<b>Add DF</b>	<b>Std</b>	
150,000 miles	CO	--	--	--	0	--	--	0.29	999.999	
150,000 miles	NMOG	--	--	1.03	0	--	--	0.0025	999.999	
150,000 miles	NOX	--	--	--	0	--	--	0.002	999.999	

### Certification Summary Information Report

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60
<b>Cert Region</b>	Federal	<b>Cert/In-Use Code</b>	Cert
<b>Vehicle Class</b>	LDV/Passenger Car	<b>Standard Level</b>	Other
<b>Fuel</b>	Gasoline	<b>Test Procedure</b>	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	--	--	0.0025	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.020
150,000 miles	NOX	--	--	--	0	--	--	0.002	999.999

**Evaporative/Refueling Standards**

<b>Evaporative/Refueling Family</b>	VBMXR0150G60	<b>Cert Region</b>	Federal
<b>Cert/In-Use Code</b>	Cert	<b>Standard Level</b>	Federal Tier 3 Evap
<b>Test Procedure</b>	2-day evap		

  

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.300	0

<b>Evaporative/Refueling Family</b>	VBMXR0150G60	<b>Cert Region</b>	Federal
<b>Cert/In-Use Code</b>	Cert	<b>Standard Level</b>	Federal Tier 3 Evap
<b>Test Procedure</b>	Evap Canister Bleed Test		

  

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.020	0

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

  

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

<b>Evaporative/Refueling Family</b>	VBMXR0150G60	<b>Cert Region</b>	Federal
<b>Cert/In-Use Code</b>	Cert	<b>Standard Level</b>	Federal Tier 3 Evap
<b>Test Procedure</b>	Federal fuel refueling test (ORVR)		

  

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC	--	0.20	0

### Certification Summary Information Report

<b>Test Group</b>	VBMXV02.0B4P	<b>Evaporative/Refueling Family</b>	VBMXR0150G60		
<b>Evaporative/Refueling Family</b>	VBMXR0150G60	<b>Cert Region</b>	Federal		
<b>Cert/In-Use Code</b>	Cert	<b>Standard Level</b>	Federal Tier 3 Evap		
<b>Test Procedure</b>	Federal Fuel Running Loss				
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.05	0
<b>Evaporative/Refueling Family</b>	VBMXR0150G60	<b>Cert Region</b>	Federal		
<b>Cert/In-Use Code</b>	Cert	<b>Standard Level</b>	Federal Tier 3 Evap		
<b>Test Procedure</b>	Federal fuel 3-day evap				
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.300	0

## Certification Summary Information Report

Test Group	VBMXV02.0B4P	Evaporative/Refueling Family	VBMXR0150G60
<b>Glossary</b>			
<b>Useful Life</b>			
4	4,000 miles	120	120,000 miles
50	50,000 miles	150	150,000 miles
100	100,000 miles		
<b>Emission Name</b>			
HC-TOTAL	Total Hydrocarbon	AS-VOLT	Average System Voltage
CO	Carbon Monoxide	CO2 BAG 1	Bag 1 Carbon Dioxide
CO2	Carbon dioxide	CO2 BAG 2	Bag 2 Carbon Dioxide
CREE	Carbon-Related Exhaust Emissions	CO2 BAG 3	Bag 3 Carbon Dioxide
OPT-CREE	Optional Carbon-Related Exhaust Emissions	CO2 BAG 4	Bag 4 Carbon Dioxide
NOX	Nitrogen Oxide	NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides
PM	Particulate Matter	NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides
PM-COMP	SFTP Composite Particulate Matter	DT-IWRR	Drive Trace Inertia Work Ratio Rating
HC-NM	Non-methane Hydrocarbon	DT-ASCR	Drive Trace Absolute Speed Change Rating
OMHCE	Organic material Hydrocarbon Equivalent	DT-EER	Drive Trace Energy Economy Rating
OMNMHCE	Organic material non-methane HC equivalent	COMB-CREE	Combined Carbon-Related Exhaust Emissions
NMOG	Non-methane organic gases	COMB-OPT-CREE	Combined Optional Carbon-Related Exhaust Emissions
HCHO	Formaldehyde	HC-TOTAL-EQUIV	Total Hydrocarbon equivalent - Evap only
H3C2HO	Acetaldehyde	METHANE-COMB	Combined CH4 for HD 2b/3 vehicles only
HC-NM+NOX	SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03	N2O-COMB	Combined Nitrous Oxide for HD 2b/3 vehicles only
HC-NM+NOX-COMP	SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides	LEAK-DIA	Effective Leak Diameter (inches)
CO-COMP	SFTP Composite Carbon Monoxide	LEAK-GAS CAP	Gas Cap Leakage (cc/min)
ETHANOL	C2H5OH - Ethanol	CO2-COMB	Combined Carbon Dioxide for HD 2b/3 Vehicles Only
FE BAG 1	Bag 1 Fuel Economy	KW-HRS	Integrated DC KW-HRS
FE BAG 2	Bag 2 Fuel Economy	CH4 BAG 1	Bag 1 Methane
FE BAG 3	Bag 3 Fuel Economy	CH4 BAG 2	Bag 2 Methane
FE BAG 4	Bag 4 Fuel Economy	CH4 BAG 3	Bag 3 Methane
MFR FE	Manufacturer Fuel Economy	CH4 BAG 4	Bag 4 Methane
HC	Hydrocarbon for Running Loss and ORVR	CO BAG 1	Bag 1 Carbon Monoxide
METHANE	CH4 - Methane	CO BAG 2	Bag 2 Carbon Monoxide
METHANOL	CH3OH - Methanol	CO BAG 3	Bag 3 Carbon Monoxide
N2O	Nitrous Oxide	CO BAG 4	Bag 4 Carbon Monoxide
SPITBACK	Spitback Hydrocarbon in grams	NMOG BAG 1	Bag 1 Non-methane organic gases
AMP-HRS	Integrated Amp-hours	NMOG BAG 2	Bag 2 Non-methane organic gases
START-SOC	System Start State of Charge Watt-hours	NMOG BAG 3	Bag 3 Non-methane organic gases
END-SOC	System End State of Charge Watt-hours	NMOG BAG 4	Bag 4 Non-methane organic gases
ACT-DISTANCE	Actual Distance Driven (miles)		
<b>Certification Region</b>			

## Certification Summary Information Report

Test Group	VBMXV02.0B4P	Evaporative/Refueling Family		VBMXR0150G60
CA	California + CAA Section 177 states	FA	Federal	
<b>Exhaust Emission Standard Level</b>				
B1	Federal Tier 2 Bin 1	T3B160	Federal Tier 3 Bin 160	
B2	Federal Tier 2 Bin 2	T3B125	Federal Tier 3 Bin 125	
B3	Federal Tier 2 Bin 3	T3B110	Federal Tier 3 Transitional Bin 110	
B4	Federal Tier 2 Bin 4	T3B85	Federal Tier 3 Transitional Bin 85	
B5	Federal Tier 2 Bin 5	T3SULEV30	Federal Tier 3 Transitional LEV-II SULEV30 Carryover	
B6	Federal Tier 2 Bin 6	T3B70	Federal Tier 3 Bin 70	
B7	Federal Tier 2 Bin 7	T3B50	Federal Tier 3 Bin 50	
B8	Federal Tier 2 Bin 8	T3B30	Federal Tier 3 Bin 30	
B9	Federal Tier 2 Bin 9	T3B20	Federal Tier 3 Bin 20	
B10	Federal Tier 2 Bin 10	T3B0	Federal Tier 3 Bin 0	
B11	Federal Tier 2 Bin 11	HDV2B395	Federal Tier 3 HD Class 2b Transitional Bin 395	
HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)	HDV2B340	Federal Tier 3 HD Class 2b Transitional Bin 340	
HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)	HDV2B250	Federal Tier 3 HD Class 2b Bin 250	
L2	California LEV-II LEV	HDV2B200	Federal Tier 3 HD Class 2b Bin 200	
L2OP	California LEV-II LEV Optional	HDV2B170	Federal Tier 3 HD Class 2b Bin 170	
U2	California LEV-II ULEV	HDV2B150	Federal Tier 3 HD Class 2b Bin 150	
S2	California LEV-II SULEV	HDV2B0	Federal Tier 3 HD Class 2b Bin 0	
ZEV	California ZEV	HDV3B630	Federal Tier 3 HD Class 3 Transitional Bin 630	
OT	Other	HDV3B570	Federal Tier 3 HD Class 3 Transitional Bin 570	
T1	Federal Tier 1	HDV3B400	Federal Tier 3 HD Class 3 Bin 400	
PZEV	California PZEV	HDV3B270	Federal Tier 3 HD Class 3 Bin 270	
L2LEV160	California LEV-II LEV160	HDV3B230	Federal Tier 3 HD Class 3 Bin 230	
L2ULEV125	California LEV-II ULEV125	HDV3B200	Federal Tier 3 HD Class 3 Bin 200	
L2SULEV30	California LEV-II SULEV30	HDV3B0	Federal Tier 3 HD Class 3 Bin 0	
L2LEV395	California LEV-II LEV395	L4SULEV100	California LEV-IV SULEV100	
L2ULEV340	California LEV-II ULEV340	L4SULEV125	California LEV-IV SULEV125	
L2LEV630	California LEV-II LEV630	L4SULEV15	California LEV-IV SULEV15	
L2ULEV570	California LEV-II ULEV570	L4SULEV150	California LEV-IV SULEV150	
L3LEV160	California LEV-III LEV160	L4SULEV170	California LEV-IV SULEV170	
L3ULEV125	California LEV-III ULEV125	L4SULEV175	California LEV-IV SULEV175	
L3ULEV70	California LEV-III ULEV70	L4SULEV20	California LEV-IV SULEV20	
L3ULEV50	California LEV-III ULEV50	L4SULEV200	California LEV-IV SULEV200	
L3SULEV30	California LEV-III SULEV30	L4SULEV230	California LEV-IV SULEV230	
L3SULEV20	California LEV-III SULEV20	L4SULEV25	California LEV-IV SULEV25	
L3LEV395	California LEV-III LEV395	L4SULEV30	California LEV-IV SULEV30	
L3ULEV340	California LEV-III ULEV340	L4SULEV75	California LEV-IV SULEV75	
L3ULEV250	California LEV-III ULEV250	L4SULEV85	California LEV-IV SULEV85	
L3ULEV200	California LEV-III ULEV200	L4ULEV125	California LEV-IV ULEV125	

## Certification Summary Information Report

Test Group		VBMXV02.0B4P	Evaporative/Refueling Family		VBMXR0150G60
L3SULEV170	California LEV-III SULEV170		L4ULEV200	California LEV-IV ULEV200	
L3SULEV150	California LEV-III SULEV150		L4ULEV250	California LEV-IV ULEV250	
L3LEV630	California LEV-III LEV630		L4ULEV270	California LEV-IV ULEV270	
L3ULEV570	California LEV-III ULEV570		L4ULEV40	California LEV-IV ULEV40	
L3ULEV400	California LEV-III ULEV400		L4ULEV400	California LEV-IV ULEV400	
L3ULEV270	California LEV-III ULEV270		L4ULEV50	California LEV-IV ULEV50	
L3SULEV230	California LEV-III SULEV230		L4ULEV60	California LEV-IV ULEV60	
L3SULEV200	California LEV-III SULEV200		L4ULEV70	California LEV-IV ULEV70	
<b>Transmission Type Code</b>					
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)	
<b>Drive System Code</b>					
4	4-Wheel Drive		P	Part-time 4-Wheel Drive	
F	2-Wheel Drive, Front		A	All Wheel Drive	
R	2-Wheel Drive, Rear				
<b>Additional Terms and Acronyms</b>					
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	