

**Certification Summary Information Report**

<b>Manufacturer</b>	BMW	<b>Manufacturer Code</b>	BMX
<b>Test Group</b>	VBMXT04.4S6M	<b>Evaporative/Refueling Family</b>	VBMXR0180G05
<b>Certificate Number</b>	VBMXT04.4S6M-011	<b>CARB Executive Order #</b>	--
<b>Certificate Issue Date</b>	02/11/2026	<b>Certificate Revision Date</b>	--
<b>Certificate Effective Date</b>	02/11/2026	<b>Conditional Certificate</b>	No
<b>CSI Revision #</b>	--	<b>CSI Submission/Revision Date</b>	02/05/2026 08:05:58 AM
<b>Model Year</b>	2027		

## Certification Summary Information Report

<b>Test Group</b>	VBMXT04.4S6M	<b>Evaporative/Refueling Family</b>	VBMXR0180G05
<b>Test Group Information</b>			
<b>CSI Type</b>	Update for Correction	<b>Running Change Reference Number</b>	--
<b>GHG Exempt Status</b>	Not Exempt		
<b>Drive Sources and Fuel(s)</b>			
<b>Drive Source #1:</b>	Combustion Engine		
	<b>Fuel</b>	<b>Basic Fuel Metering System</b>	<b>Lean Burn Strategy Indicator</b>
	Gasoline	Spark Ignition Direct fuel injection	No
<b>Drive Source #2:</b>	Electric Motor		
	<b>Fuel</b>	<b>Basic Fuel Metering System</b>	<b>Lean Burn Strategy Indicator</b>
	Electricity	--	--
<b>Hybrid Indicator</b>	Yes		
<b>Multiple Fuel Storage</b>	--	<b>Rechargeable Energy Storage System Indicator</b>	Yes
<b>Multiple Fuel Combustion</b>	--	<b>Off-board Charge Capable Indicator</b>	No
<b>Fuel Cell Indicator</b>	No	<b>EPA Vehicle Class</b>	LDT4
<b>Federal Clean Fuel Vehicle</b>	No	<b>Federal Clean Fuel Vehicle Standard</b>	--
<b>Federal Clean Fuel Vehicle ILEV</b>	No	<b>California Partial Zero Emissions Vehicle Indicator</b>	--
<b>Durability Group Name</b>	VBMXHHGVNV39	<b>Durability Group Equivalency Factor</b>	1
<b>Reduced Fee Test Group</b>	No	<b>Certification Region Code(s)</b>	FA
<b>Complies with HD GHG 2b/3 regulations?</b>	No		
<b>Introduction into Commerce Date</b>	04/01/2026	<b>CAP2000 Conditional Certificate?</b>	No
<b>Independent Commercial Importer?</b>	No	<b>Alternative Fuel Converter Certificate?</b>	No
<b>SFTP Federal Composite Compliance Identifier</b>	Tier 3	<b>SFTP Tier 2 Composite CO Option</b>	--
<b>SFTP LEV-III Composite Compliance Indicator</b>	No		
<b>OBD Compliance Type</b>	CARB	<b>OBD Demonstration Vehicle Test Group</b>	VBMXT04.4S6M
<b>Test Group OBD Compliance Level</b>	Partial - with deficiencies and penalty	<b>Number of Test Group OBD Deficiencies</b>	6
<b>OBD Deficiencies Comments</b>	E-26-017		
<b>Mfr Test Group Comments</b>	--		
<b>Mfr Exhaust / Evap Standards Comments</b>	--		

### Certification Summary Information Report

<b>Test Group</b>	VBMXT04.4S6M	<b>Evaporative/Refueling Family</b>	VBMXR0180G05				
<b>Evaporative/Refueling Family Information</b>							
<b>Evaporative Summary Information Type</b>	New	<b>Submission/Correction Date</b>	01/08/2026 08:14:58 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>	180	<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	294 - X6 M Competition	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>	V-shaped engine	<b>Mfr Engine Block Arrangement Description</b>	--				
<b>Camless Valvetrain Indicator</b>	No	<b>Oil Viscosity/Classification</b>	0W30				
<b>Number of Cylinders/Rotors</b>	8	<b>Mechanically Variable Compression Ratio Indicator</b>	N				

## Certification Summary Information Report

Test Group	VBMXT04.4S6M	Evaporative/Refueling Family	VBMXR0180G05	
<b>After Treatment Device(s) (ATD)</b>				
ATD Number	ATD Type	ATD Precious Metal	Substrate Material	Substrate Construction
1	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
2	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
3	Three-way catalyst	Palladium + Rhodium	Metal	Monolith
4	Three-way catalyst	Palladium + Rhodium	Metal	Monolith
<b>Mfr After Treatment Device (ATD) Comments</b>				--
<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>	4.4	<b>Engine Rated Horsepower</b>	617	
<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>	2	
<b>Air Aspiration Device Configuration</b>	Parallel	<b>Charge Air Cooler Type</b>	Liquid	
<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			
<b>Number of Knock Sensors</b>	4	<b>Number of Air/Fuel Sensors</b>	4	
<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>Air/Fuel Sensor # 3 Type</b>	Air fuel	<b>Air/Fuel Sensor # 3 Description</b>	--	
<b>Air/Fuel Sensor # 4 Type</b>	Heated oxygen	<b>Air/Fuel Sensor # 4 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>	--			

## Certification Summary Information Report

Test Group		VBMXT04.4S6M				Evaporative/Refueling Family			VBMXR0180G05		
<b>Official Test Numbers</b>											
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	RBMX10078322	RBMX10078324	RBMX10078325	RBMX10078329	RBMX10078323	12.8	228.2	24.1	286.1	--	
<b>SFTP LEV-III Official Test Numbers</b>											
Test Group Fuel	FTP	US06	SC03								
Gasoline	RBMX10078322	RBMX10078324	RBMX10078325								
<b>Hybrid Electric Vehicle And Fuel Cell Information</b>											
Rechargeable Energy Storage System	Battery(s)			Rechargeable Energy Storage System, if Other			--				
Battery Type	Lithium Ion			Number of Battery Packs			1				
Total Voltage of Battery Packs	44			Battery Energy Capacity			10				
Battery Specific Energy	38			Battery Charger Type			On-Board				
Number of Capacitors	--			Capacitor Rating (In Farads)			--				
Mfr Capacitor Comments	--										
Hydraulic System Description	--										
Regenerative Braking Type	Electrical Regen Brake			Driver Controlled Regenerative Braking			No				
Regenerative Braking Source	Both										
Mfr Regenerative Braking Description	--										
Drive Motor(s)/Generator(s)	1			Rated Motor/Generator Power			9				
Motor/Generator Type 1	PMSM										
Mfr Fuel Cell Description	--										
Fuel Cell On-Board H2 Storage Capacity (kg)	--			Usable H2 Fill Capacity (kg)			--				
Mfr Hybrid Electric/ Electric Vehicle Comments	Starter Generator Engine with 48V Technology; Motor/Generator Type: permanent magnet synchronous machine (PMSM)										

## Certification Summary Information Report

<b>Test Group</b>	VBMXT04.4S6M	<b>Evaporative/Refueling Family</b>	VBMXR0180G05									
<b>Emission Data Vehicle Information</b>												
<b>Vehicle ID / Configuration</b>	9M38654 / 0	<b>Manufacturer Vehicle Configuration Number</b>	0									
<b>Original Test Group Name</b>	RBMXT04.4S6M	<b>Original Evaporative/Refueling Family</b>	RBMXR0180G05									
<b>Original Test Vehicle Model Year</b>	2024											
<b>Vehicle Model</b>												
<b>Represented Test Vehicle Make</b>	BMW	<b>Represented Test Vehicle Model</b>	X5 M Competition									
<b>Leak Family Details</b>												
<b>Leak Family Identifier</b>	--	<b>Leak Family Name</b>	--									
<b>Drive Sources and Fuel System Details</b>												
<table border="1"> <thead> <tr> <th>Drive Source and Fuel#</th> <th>Drive Source</th> <th>Fuel</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Combustion Engine</td> <td>Gasoline</td> </tr> <tr> <td>2</td> <td>Electric Motor</td> <td>Electricity</td> </tr> </tbody> </table>				Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	Gasoline	2	Electric Motor	Electricity
Drive Source and Fuel#	Drive Source	Fuel										
1	Combustion Engine	Gasoline										
2	Electric Motor	Electricity										
<b>Hybrid Indicator</b>	Yes											
<b>Multiple Fuel Storage</b>	--	<b>Multiple Fuel Combustion</b>	--									
<b>Fuel Cell Indicator</b>	No	<b>Rechargeable Energy Storage System Indicator</b>	Yes									
<b>Rechargeable Energy Storage System</b>	Battery(s)	<b>Rechargeable Energy Storage System, if 'Other'</b>	--									
<b>Off-board charge Capable Indicator</b>	No											
<b>Odometer Correction -- Initial</b>	0	<b>Odometer Correction Factor</b>	1									
<b>Odometer Correction Sign</b>	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor											
<b>Odometer Correction Units</b>	Miles											
<b>Engine Code</b>	S68B44T0F95X	<b>Rated Horsepower</b>	617									
<b>Displacement (liters)</b>	4.4											
<b>Air Aspiration Method</b>	Turbocharged	<b>Air Aspiration Method, if 'Other'</b>										
<b>Number of Air Aspiration Devices</b>	2	<b>Air Aspiration Device Configuration</b>	Parallel									
<b>Charge Air Cooler Type</b>	Liquid	<b>Drive Mode While Testing</b>	All Wheel Drive									
<b>Shift Indicator Light Usage</b>	Not equipped	<b>Aged Emission Components</b>	4,000 (mi)									
<b>Curb Weight (lbs)</b>	5498	<b>Equivalent Test Weight (pounds)</b>	6000									
<b>GVWR (lbs)</b>	6614	<b>N/V Ratio</b>	23.7									
<b>Axle Ratio</b>	3.15											
<b>Transmission Type</b>	Semi-Automatic	<b># of Transmission Gears</b>	8									
<b>Transmission Lockup</b>	Yes	<b>Creeper Gear</b>	No									

## Certification Summary Information Report

Test Group		VBMXT04.4S6M			Evaporative/Refueling Family			VBMXR0180G05
<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	67.1	0.009	0.03284	0.2	0.332	0.02698	20	
Cold CO	74.5	0.01	0.03649	-16.2	0.465	0.0276	N/A	
US06	67.1	0.009	0.03284	0.2	0.332	0.02698	N/A	
Emission Control Device Comments	--							
Manufacturer Test Vehicle Comments	vi_9M38654_00_EDV_X5 M Competition_A_ETW-6000_RG10_MSA off_D3_Sport+							

## Certification Summary Information Report

<b>Test Group</b>	VBMXT04.4S6M	<b>Evaporative/Refueling Family</b>	VBMXR0180G05
<b>Test #</b>	<b>RBMX10078322</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>	11/22/2022	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	T10/87	<b>Fuel Calibration Number</b>	30
<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>	Calculated (1.08 x FID Total Hydrocarbons)		
<b>Test Start Odometer Reading</b>	3567	<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)	662.8185	--
FE BAG 1 (Bag 1 Fuel Economy)	12.9	12.9
CO2 BAG 2 (Bag 2 Carbon Dioxide)	685.6377	--
FE BAG 2 (Bag 2 Fuel Economy)	12.5	12.5
CO2 BAG 3 (Bag 3 Carbon Dioxide)	568.107	--
FE BAG 3 (Bag 3 Fuel Economy)	15.1	15.1
CO2 BAG 4 (Bag 4 Carbon Dioxide)	669.6205	--
FE BAG 4 (Bag 4 Fuel Economy)	12.8	12.8
METHANE (CH4 - Methane)	0.00185	--
CO (Carbon Monoxide)	0.403	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.289	--
DT-EER (Drive Trace Energy Economy Rating)	-0.328	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.413	--
MFR FE (Manufacturer Fuel Economy)	13.3	13.3
NOX (Nitrogen Oxide)	0.02456	--
N2O (Nitrous Oxide)	0.00113	--
HC-NM (Non-methane Hydrocarbon)	0.00711	--
NMOG (Non-methane organic gases)	0.00782	--
PM (Particulate Matter)	0.00072	--
HC-TOTAL (Total Hydrocarbon)	0.0088	--

### Certification Summary Information Report

<b>Test Group</b>	VBMXT04.4S6M	Evaporative/Refueling Family	VBMXR0180G05
-------------------	--------------	------------------------------	--------------

<b>Test Result Name</b>	<b>Unrounded Test Result</b>	<b>Verify Calculated CREE/OPT-CREE</b>
Carbon-Related Exhaust Emissions	645	999

<b>Test Result Name</b>	<b>Unrounded Test Result</b>	<b>Verify Calculated CO2</b>
Carbon dioxide	643.7885	--

**Manufacturer Test Comments**                      01\_FTP\_9M38654\_00\_EDV\_X5 M Competition\_A\_ETW-6000\_RG10\_MSA off\_D3\_Sport+

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	--	--	--	0.3	--	999	--	--
Fed	120,000 miles	Other	METHANE	0.0018	--	--	--	0.0025	--	0.004	0.030	Pass
Fed	120,000 miles	Other	N2O	0.0011	--	--	--	0.0002	--	0.001	0.010	Pass
Fed	150,000 miles	Other	CO	0.4	--	--	--	0.19	--	0.6	1.7	Pass
Fed	150,000 miles	Other	CO-COMP	0.57	--	--	--	--	--	0.6	4.2	Pass
Fed	150,000 miles	Other	NMOG	0.0078	--	1.1	--	0.0057	--	0.014	999.999	Pass
Fed	150,000 miles	Other	NMOG+NOX	0.0324	--	--	--	--	--	0.04	0.070	Pass
Fed	150,000 miles	Other	NMOG+NOX-COMP	0.0355	--	--	--	--	--	0.036	0.070	Pass
Fed	150,000 miles	Other	NOX	0.0246	--	--	--	0.0014	--	0.026	999.999	Pass
Fed	150,000 miles	Other	PM	0.0007	--	--	--	0.0004	--	0.001	0.003	Pass

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

### Certification Summary Information Report

<b>Test Group</b>	VBMXT04.4S6M	<b>Evaporative/Refueling Family</b>	VBMXR0180G05
<b>Test #</b>	<b>RBMX10078329</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>	12/08/2022	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	COE10	<b>Fuel Calibration Number</b>	31
<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>	3820	<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>	806.1976	--
<b>FE BAG 1 (Bag 1 Fuel Economy)</b>	10.6	10.6
<b>CO2 BAG 2 (Bag 2 Carbon Dioxide)</b>	740.8305	--
<b>FE BAG 2 (Bag 2 Fuel Economy)</b>	11.6	11.6
<b>CO2 BAG 3 (Bag 3 Carbon Dioxide)</b>	614.395	--
<b>FE BAG 3 (Bag 3 Fuel Economy)</b>	14	14
<b>METHANE (CH4 - Methane)</b>	0.00425	--
<b>CO (Carbon Monoxide)</b>	0.6287	--
<b>DT-ASCR (Drive Trace Absolute Speed Change Rating)</b>	0.151	--
<b>DT-EER (Drive Trace Energy Economy Rating)</b>	-0.53	--
<b>DT-IWRR (Drive Trace Inertia Work Ratio Rating)</b>	0.024	--
<b>MFR FE (Manufacturer Fuel Economy)</b>	11.9	11.9
<b>HC-NM (Non-methane Hydrocarbon)</b>	0.02616	--
<b>HC-TOTAL (Total Hydrocarbon)</b>	0.03021	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
<b>Carbon dioxide</b>	719.6471	--

**Manufacturer Test Comments**                      06\_FTPCOLD\_9M38654\_00\_EDV\_X5 M Competition\_A\_ETW-6000\_RG10\_MSA off\_D3\_Sport+

### Certification Summary Information Report

<b>Test Group</b>	VBMXT04.4S6M	<b>Evaporative/Refueling Family</b>	VBMXR0180G05
-------------------	--------------	-------------------------------------	--------------

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	0.63	--	--	--	0.06	--	0.7	12.5	Pass
Fed	120,000 miles	Other	HC-NM	0.03	--	--	--	0	--	0	0.5	Pass

## Certification Summary Information Report

<b>Test Group</b>	VBMXT04.4S6M	<b>Evaporative/Refueling Family</b>	VBMXR0180G05
<b>Test #</b>	<b>RBMX10078323</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>	11/23/2022	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	T10/87	<b>Fuel Calibration Number</b>	30
<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>	3591	<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)	0.00651	--
CO (Carbon Monoxide)	0.1854	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-3.362	--
DT-EER (Drive Trace Energy Economy Rating)	-0.764	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-4.446	--
MFR FE (Manufacturer Fuel Economy)	22.3	22.3
NOX (Nitrogen Oxide)	0.0016	--
HC-NM (Non-methane Hydrocarbon)	0.00614	--
NMOG (Non-methane organic gases)	0.00633	--
HC-TOTAL (Total Hydrocarbon)	0.01238	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	385	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	385.0423	--

## Manufacturer Test Comments

02\_HWFET\_9M38654\_00\_EDV\_X5 M Competition\_A\_ETW-6000\_RG10\_MSA off\_D3\_Sport+

### Certification Summary Information Report

Test Group		VBMXT04.4S6M				Evaporative/Refueling Family				VBMXR0180G05		
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	--	--	--	0.3	--	999	--	--
Fed	150,000 miles	Other	NMOG	0.0063	--	1.03	--	0.0057	--	0.012	999.999	Pass
Fed	150,000 miles	Other	NMOG+NOX	0.0079	--	--	--	--	--	0.015	0.070	Pass
Fed	150,000 miles	Other	NOX	0.0016	--	--	--	0.0014	--	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>	VBMXT04.4S6M	<b>Evaporative/Refueling Family</b>	VBMXR0180G05
<b>Test #</b>	<b>RBMX10078324</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>	11/23/2022	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	T10/87	<b>Fuel Calibration Number</b>	30
<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>	3623	<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)	862.4078	--
FE BAG 1 (Bag 1 Fuel Economy)	9.9	9.9
CO2 BAG 2 (Bag 2 Carbon Dioxide)	440.4453	--
FE BAG 2 (Bag 2 Fuel Economy)	19.5	19.5
METHANE (CH4 - Methane)	0.00712	--
CO (Carbon Monoxide)	0.611	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.621	--
DT-EER (Drive Trace Energy Economy Rating)	-0.237	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.517	--
MFR FE (Manufacturer Fuel Economy)	16	16
NOX (Nitrogen Oxide)	0.00611	--
HC-NM (Non-methane Hydrocarbon)	0.01272	--
NMOG (Non-methane organic gases)	0.01311	--
PM (Particulate Matter)	0.00198	--
HC-TOTAL (Total Hydrocarbon)	0.01955	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	533.8868	--

## Manufacturer Test Comments

03\_US06\_9M38654\_00\_EDV\_X5 M Competition\_A\_ETW-6000\_RG10\_MSA off\_D3\_Sport+

### Certification Summary Information Report

<b>Test Group</b>	VBMXT04.4S6M	Evaporative/Refueling Family	VBMXR0180G05
-------------------	--------------	------------------------------	--------------

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	0.61	--	--	--	0.19	--	0.8	999.9	Pass
Fed	150,000 miles	Other	NMOG	0.0131	--	1.03	--	0.0057	--	0.019	999.999	Pass
Fed	150,000 miles	Other	NOX	0.0061	--	--	--	0.0014	--	0.008	999.999	Pass
Fed	150,000 miles	Other	PM	0.002	--	--	--	0.0004	--	0.002	0.006	Pass

### Certification Summary Information Report

<b>Test Group</b>	VBMXT04.4S6M	<b>Evaporative/Refueling Family</b>	VBMXR0180G05
<b>Test #</b>	<b>RBMX10078325</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>	11/28/2022	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	T10/87	<b>Fuel Calibration Number</b>	30
<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>	3692	<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)	0.00062	--
CO (Carbon Monoxide)	0.1792	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.407	--
DT-EER (Drive Trace Energy Economy Rating)	-0.527	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.344	--
MFR FE (Manufacturer Fuel Economy)	11.2	11.2
NOX (Nitrogen Oxide)	0.02609	--
HC-NM (Non-methane Hydrocarbon)	0.00542	--
NMOG (Non-methane organic gases)	0.00558	--
HC-TOTAL (Total Hydrocarbon)	0.00601	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	769.2162	--

**Manufacturer Test Comments**                      04\_SC03\_9M38654\_00\_EDV\_X5 M Competition\_A\_ETW-6000\_RG10\_MSA off\_D3\_Sport+

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	0.18	--	--	--	0.19	--	0.4	999.9	Pass
Fed	150,000 miles	Other	NMOG	0.0056	--	1.03	--	0.0057	--	0.011	999.999	Pass
Fed	150,000 miles	Other	NOX	0.0261	--	--	--	0.0014	--	0.028	999.999	Pass

## Certification Summary Information Report

Test Group	VBMXT04.4S6M	Evaporative/Refueling Family	VBMXR0180G05									
<b>Emission Data Vehicle Information</b>												
Vehicle ID / Configuration	9M38654 / 2	Manufacturer Vehicle Configuration Number	0									
Original Test Group Name	RBMXT04.4S6M	Original Evaporative/Refueling Family	RBMXR0180G05									
Original Test Vehicle Model Year	2024											
<b>Vehicle Model</b>												
Represented Test Vehicle Make	BMW	Represented Test Vehicle Model	X5 M Competition									
<b>Leak Family Details</b>												
Leak Family Identifier	--	Leak Family Name	--									
<b>Drive Sources and Fuel System Details</b>												
<table border="1"> <thead> <tr> <th>Drive Source and Fuel#</th> <th>Drive Source</th> <th>Fuel</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Combustion Engine</td> <td>Gasoline</td> </tr> <tr> <td>2</td> <td>Electric Motor</td> <td>Electricity</td> </tr> </tbody> </table>				Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	Gasoline	2	Electric Motor	Electricity
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	0	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	S68B44T0F95X	Rated Horsepower	617									
Displacement (liters)	4.4											
Air Aspiration Method	Turbocharged	Air Aspiration Method, if 'Other'										
Number of Air Aspiration Devices	2	Air Aspiration Device Configuration	Parallel									
Charge Air Cooler Type	Liquid	Drive Mode While Testing	All Wheel Drive									
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)									
Curb Weight (lbs)	5498	Equivalent Test Weight (pounds)	6000									
GVWR (lbs)	6614	N/V Ratio	23.7									
Axle Ratio	3.15											
Transmission Type	Semi-Automatic	# of Transmission Gears	8									
Transmission Lockup	Yes	Creeper Gear	No									

### Certification Summary Information Report

<b>Test Group</b>	VBMXT04.4S6M	<b>Evaporative/Refueling Family</b>	VBMXR0180G05
-------------------	--------------	-------------------------------------	--------------

**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>	67.1	0.009	0.03284	0.2	0.332	0.02698	20
<b>US06</b>	67.1	0.009	0.03284	0.2	0.332	0.02698	N/A

**Emission Control Device Comments**

--

**Manufacturer Test Vehicle Comments**

vi\_9M38654\_02\_FEDV\_X5 M Competition\_A\_ETW-6000\_RG11\_MSA off\_D3\_Sport+

## Certification Summary Information Report

<b>Test Group</b>	VBMXT04.4S6M	<b>Evaporative/Refueling Family</b>	VBMXR0180G05
<b>Test #</b>	<b>RBMX10078332</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>	12/06/2022	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	T2/E0	<b>Fuel Calibration Number</b>	29
<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>	Calculated (1.08 x FID Total Hydrocarbons)		
<b>Test Start Odometer Reading</b>	3751	<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)	662.0493	--
FE BAG 1 (Bag 1 Fuel Economy)	13.2	13.2
CO2 BAG 2 (Bag 2 Carbon Dioxide)	682.4946	--
FE BAG 2 (Bag 2 Fuel Economy)	12.8	12.8
CO2 BAG 3 (Bag 3 Carbon Dioxide)	564.4917	--
FE BAG 3 (Bag 3 Fuel Economy)	15.5	15.5
CO2 BAG 4 (Bag 4 Carbon Dioxide)	662.2321	--
FE BAG 4 (Bag 4 Fuel Economy)	13.2	13.2
METHANE (CH4 - Methane)	0.00282	--
CO (Carbon Monoxide)	0.6546	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.492	--
DT-EER (Drive Trace Energy Economy Rating)	-0.342	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.568	--
MFR FE (Manufacturer Fuel Economy)	13.7	13.7
NOX (Nitrogen Oxide)	0.01261	--
N2O (Nitrous Oxide)	0.00082	--
HC-NM (Non-methane Hydrocarbon)	0.01272	--
NMOG (Non-methane organic gases)	0.01323	--
HC-TOTAL (Total Hydrocarbon)	0.01534	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	641	641

### Certification Summary Information Report

<b>Test Group</b>	VBMXT04.4S6M	<b>Evaporative/Refueling Family</b>	VBMXR0180G05
-------------------	--------------	-------------------------------------	--------------

<b>Test Result Name</b>	<b>Unrounded Test Result</b>	<b>Verify Calculated CO2</b>
Carbon dioxide	639.7996	--

**Manufacturer Test Comments**                      01\_FTP\_9M38654\_02\_FEDV\_X5 M Competition\_A\_ETW-6000\_RG11\_MSA off\_D3\_Sport+

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	641	--	--	--	0.3	--	641	--	--
Fed	120,000 miles	Other	METHANE	0.0028	--	--	--	0.0025	--	0.005	0.030	Pass
Fed	120,000 miles	Other	N2O	0.0008	--	--	--	0.0002	--	0.001	0.010	Pass
Fed	150,000 miles	Other	CO	0.65	--	--	--	0.19	--	0.8	1.7	Pass
Fed	150,000 miles	Other	NMOG	0.0132	--	1.1	--	0.0057	--	0.019	999.999	Pass
Fed	150,000 miles	Other	NMOG+NOX	0.0258	--	--	--	--	--	0.033	0.070	Pass
Fed	150,000 miles	Other	NOX	0.0126	--	--	--	0.0014	--	0.014	999.999	Pass

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

## Certification Summary Information Report

<b>Test Group</b>	VBMXT04.4S6M	<b>Evaporative/Refueling Family</b>	VBMXR0180G05
<b>Test #</b>	<b>RBMX10078333</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>	12/06/2022	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	T2/E0	<b>Fuel Calibration Number</b>	29
<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>	3775	<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>METHANE (CH4 - Methane)</b>	0.00598	--
<b>CO (Carbon Monoxide)</b>	0.2474	--
<b>DT-ASCR (Drive Trace Absolute Speed Change Rating)</b>	0.774	--
<b>DT-EER (Drive Trace Energy Economy Rating)</b>	-0.197	--
<b>DT-IWRR (Drive Trace Inertia Work Ratio Rating)</b>	0.844	--
<b>MFR FE (Manufacturer Fuel Economy)</b>	22.8	22.8
<b>NOX (Nitrogen Oxide)</b>	0.00137	--
<b>HC-NM (Non-methane Hydrocarbon)</b>	0.00654	--
<b>NMOG (Non-methane organic gases)</b>	0.00673	--
<b>HC-TOTAL (Total Hydrocarbon)</b>	0.01227	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
<b>Carbon-Related Exhaust Emissions</b>	383	383

Test Result Name	Unrounded Test Result	Verify Calculated CO2
<b>Carbon dioxide</b>	383.4459	--

## Manufacturer Test Comments

02\_HWFET\_9M38654\_02\_FEDV\_X5 M Competition\_A\_ETW-6000\_RG11\_MSA off\_D3\_Sport+

### Certification Summary Information Report

Test Group		VBMXT04.4S6M				Evaporative/Refueling Family				VBMXR0180G05		
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	383	--	--	--	0.3	--	383	--	--
Fed	150,000 miles	Other	NMOG	0.0067	--	1.03	--	0.0057	--	0.012	999.999	Pass
Fed	150,000 miles	Other	NMOG+NOX	0.0081	--	--	--	--	--	0.015	0.070	Pass
Fed	150,000 miles	Other	NOX	0.0014	--	--	--	0.0014	--	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	VBMXT04.4S6M	Evaporative/Refueling Family	VBMXR0180G05									
<b>Emission Data Vehicle Information</b>												
Vehicle ID / Configuration	L084470 / 0	Manufacturer Vehicle Configuration Number	0									
Original Test Group Name	MBMXT03.0G0X	Original Evaporative/Refueling Family	MBMXR0180G05									
Original Test Vehicle Model Year	2021											
<b>Vehicle Model</b>												
Represented Test Vehicle Make	BMW	Represented Test Vehicle Model	X7 xDrive40i									
<b>Leak Family Details</b>												
Leak Family Identifier	--	Leak Family Name	--									
<b>Drive Sources and Fuel System Details</b>												
<table border="1"> <thead> <tr> <th>Drive Source and Fuel#</th> <th>Drive Source</th> <th>Fuel</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Electric Motor</td> <td>Electricity</td> </tr> <tr> <td>2</td> <td>Combustion Engine</td> <td>Gasoline</td> </tr> </tbody> </table>				Drive Source and Fuel#	Drive Source	Fuel	1	Electric Motor	Electricity	2	Combustion Engine	Gasoline
Drive Source and Fuel#	Drive Source	Fuel										
1	Electric Motor	Electricity										
2	Combustion Engine	Gasoline										
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	0	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	B58B30M1G07X1	Rated Horsepower	335									
Displacement (liters)	3											
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 equipped	Aged Emission Components	4,000 (mi)									
Curb Weight (lbs)	5456	Equivalent Test Weight (pounds)	6000									
GVWR (lbs)	7022	N/V Ratio	27.6									
Axle Ratio	3.63											
Transmission Type	Semi-Automatic	# of Transmission Gears	8									
Transmission Lockup	Yes	Creeper Gear	No									

### Certification Summary Information Report

<b>Test Group</b>	VBMXT04.4S6M	<b>Evaporative/Refueling Family</b>	VBMXR0180G05
-------------------	--------------	-------------------------------------	--------------

**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	67.3	-0.318	0.03447	13.1	-0.318	0.03447	18.3
Cold CO	0	0	0	0	0	0	N/A
US06	67.3	-0.318	0.03447	13.1	-0.318	0.03447	N/A

**Emission Control Device Comments**      --  
**Manufacturer Test Vehicle Comments**      EVAP EDV X7 xDrive40i, AT, MY21

<b>Test #</b>	<b>MBMX10064376</b>	<b>Test Procedure</b>	<b>23 - 2-day evap</b>
<b>Exhaust Test # for this Evap Test</b>	MBMX10064375	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	03/10/2020	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	T10/87	<b>Fuel Calibration Number</b>	14
<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>	6778	<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>HC-TOTAL (Total Hydrocarbon)</b>	0.18155	--
<b>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</b>	0.196074	--

**Manufacturer Test Comments**      EVAP EDV - 2Day, X7 xDrive40i

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	0.1961	0.0594	0.256	0.5	Pass

### Certification Summary Information Report

<b>Test Group</b>	VBMXT04.4S6M	<b>Evaporative/Refueling Family</b>	VBMXR0180G05
<b>Test #</b>	<b>MBMX10064490</b>	<b>Test Procedure</b>	<b>34 - Federal fuel 3-day evap</b>
<b>Exhaust Test # for this Evap Test</b>	MBMX10064489	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	04/02/2020	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	T10/87	<b>Fuel Calibration Number</b>	14
<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>	6850	<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>HC-TOTAL (Total Hydrocarbon)</b>	0.170407	--
<b>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</b>	0.184039	--

**Manufacturer Test Comments**                      EVAP EDV - 3Day, X7 xDrive40i, MY21

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	0.184	0	0.184	0.5	Pass

### Certification Summary Information Report

<b>Test Group</b>	VBMXT04.4S6M	<b>Evaporative/Refueling Family</b>	VBMXR0180G05
<b>Test #</b>	<b>MBMX10063966</b>	<b>Test Procedure</b>	<b>24 - Federal fuel refueling test (ORVR)</b>
<b>Exhaust Test # for this Evap Test</b>	MBMX10063963	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	03/05/2020	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	T10/87	<b>Fuel Calibration Number</b>	14
<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>	6721	<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)
HC (Hydrocarbon for Running Loss and ORVR)	0.0429	--

**Manufacturer Test Comments**                      EVAP EDV, ORVR, X7 xDrive40i, MY21

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	0.043	0.011	0.05	0.2	Pass

### Certification Summary Information Report

<b>Test Group</b>	VBMXT04.4S6M	<b>Evaporative/Refueling Family</b>	VBMXR0180G05
<b>Test #</b>	<b>MBMX10064491</b>	<b>Test Procedure</b>	<b>32 - Federal Fuel Running Loss</b>
<b>Exhaust Test # for this Evap Test</b>	MBMX10064489	<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
<b>Test Date</b>	04/02/2020	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	T10/87	<b>Fuel Calibration Number</b>	14
<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>	6850	<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>HC (Hydrocarbon for Running Loss and ORVR)</b>	0.011978	--
<b>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</b>	0.012937	--

**Manufacturer Test Comments**                      EVAP EDV - RL, X7 xDrive40i, MY21

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	0.013	0	0.01	0.05	Pass

### Certification Summary Information Report

<b>Test Group</b>	VBMXT04.4S6M	<b>Evaporative/Refueling Family</b>	VBMXR0180G05
<b>Test #</b>	<b>MBMX10063967</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>	02/27/2020	<b>Fuel</b>	Gasoline
<b>Fuel Batch ID</b>	T10/87	<b>Fuel Calibration Number</b>	14
<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>	6703	<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>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>	0.00987	--
<b>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</b>	0.01066	--

**Manufacturer Test Comments**                      EVAP EDV, Bleed, X7 xDrive40i, MY21

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	0.0107	0	0.011	0.02	Pass

### Certification Summary Information Report

<b>Test Group</b>	VBMXT04.4S6M	<b>Evaporative/Refueling Family</b>	VBMXR0180G05						
<b>Test #</b>	<b>MBMX10064377</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>	02/21/2020	<b>Fuel</b>	Gasoline						
<b>Fuel Batch ID</b>	T10/87	<b>Fuel Calibration Number</b>	14						
<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>	6703	<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						
<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;">0.011</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))	0.011	--
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value							
LEAK-DIA (Effective Leak Diameter (inches))	0.011	--							
<b>Manufacturer Test Comments</b>	EDV Evap Leak Test X7 xDrive40i								
<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	0.011	0	0.01	0.02	Pass	

## Certification Summary Information Report

Test Group	VBMXT04.4S6M	Evaporative/Refueling Family	VBMXR0180G05
<b>Fuel Properties</b>			
<b>Fuel Batch ID</b>	<b>T10/87</b>	<b>Fuel Calibration Number</b>	<b>30</b>
<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	<b>Fuel Batch Calibration Date</b>	06/16/2022
<b>Fuel Batch Calibration Effective Date</b>	06/23/2022	<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>	0.745
<b>Fuel Ethanol Volume Percent (%)</b>	9.4	<b>Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)</b>	18207
<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>COE10</b>	<b>Fuel Calibration Number</b>	<b>31</b>
<b>Test Fuel Type</b>	28 - Cold CO E10 Regular Gasoline (Tier 3)	<b>Fuel Batch Calibration Date</b>	08/23/2022
<b>Fuel Batch Calibration Effective Date</b>	08/23/2022	<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>	0.826	<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>	18186
<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>	0.826	<b>Weight Fraction CO2</b>	--
<b>Fuel Batch ID</b>	<b>T10/87</b>	<b>Fuel Calibration Number</b>	<b>14</b>
<b>Test Fuel Type</b>	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	<b>Fuel Batch Calibration Date</b>	10/09/2019
<b>Fuel Batch Calibration Effective Date</b>	10/23/2019	<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>	0.826	<b>Fuel Methanol Volume Fraction</b>	--
<b>Fuel Density (grams/cubic ft)</b>	--	<b>Fuel Specific Gravity</b>	0.742
<b>Fuel Ethanol Volume Percent (%)</b>	9.4	<b>Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)</b>	18220
<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>	0.826	<b>Weight Fraction CO2</b>	--
<b>Fuel Batch ID</b>	<b>T2/E0</b>	<b>Fuel Calibration Number</b>	<b>29</b>
<b>Test Fuel Type</b>	61 - Tier 2 Cert Gasoline	<b>Fuel Batch Calibration Date</b>	05/09/2022
<b>Fuel Batch Calibration Effective Date</b>	05/19/2022	<b>Fuel Batch Calibration Ineffective Date</b>	--
<b>Carbon Weight Fraction NMHC</b>	--	<b>Carbon Weight Fraction HC</b>	--

## Certification Summary Information Report

<b>Test Group</b>	<b>VBMXT04.4S6M</b>	<b>Evaporative/Refueling Family</b>	<b>VBMXR0180G05</b>
<b>Exhaust Carbon Weight Fraction</b>	0.862	<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>	18710
<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>	0.862	<b>Weight Fraction CO2</b>	--

### Certification Summary Information Report

<b>Test Group</b>	VBMXT04.4S6M	<b>Evaporative/Refueling Family</b>	VBMXR0180G05						
<b>Consolidated List of Standards</b>									
<b>Exhaust Standards</b>									
<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	--	--	--	--	--	--	0.3	999
120,000 miles	METHANE	--	--	--	--	--	--	0.0025	0.030
120,000 miles	N2O	--	--	--	--	--	--	0.0002	0.010
150,000 miles	CO	--	--	--	--	--	--	0.19	1.7
150,000 miles	CO-COMP	--	--	--	--	--	--	--	4.2
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	NMOG	--	--	1.1	--	--	--	0.0057	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.070
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	--	0.070
150,000 miles	NOX	--	--	--	--	--	--	0.0014	999.999
150,000 miles	PM	--	--	--	--	--	--	0.0004	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>		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	--	--	--	--	--	--	0.19	999.9
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0057	999.999
150,000 miles	NOX	--	--	--	--	--	--	0.0014	999.999

### Certification Summary Information Report

<b>Test Group</b>		VBMXT04.4S6M			<b>Evaporative/Refueling Family</b>			VBMXR0180G05		
<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	--	--	--	--	--	--	0.19	999.9	
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0057	999.999	
150,000 miles	NOX	--	--	--	--	--	--	0.0014	999.999	
150,000 miles	PM	--	--	--	--	--	--	0.0004	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>			HWFE		
<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	--	--	--	--	--	--	0.3	999.999	
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0057	999.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.070	
150,000 miles	NOX	--	--	--	--	--	--	0.0014	999.999	

<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		
<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>	
50,000 miles	CO	--	--	--	--	--	--	0.06	12.5	
120,000 miles	HC-NM	--	--	--	--	--	--	0	0.5	

**Evaporative/Refueling Standards**

<b>Evaporative/Refueling Family</b>		VBMXR0180G05			<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	--	0.500	0					

## Certification Summary Information Report

<b>Test Group</b>	VBMXT04.4S6M		<b>Evaporative/Refueling Family</b>	VBMXR0180G05	
<b>Evaporative/Refueling Family</b>	VBMXR0180G05		<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				
<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	LEAK-DIA	--	0.02	0
<b>Evaporative/Refueling Family</b>	VBMXR0180G05		<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>	VBMXR0180G05		<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				
<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	--	0.020	0
<b>Evaporative/Refueling Family</b>	VBMXR0180G05		<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				
<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	--	0.500	0.0594
<b>Evaporative/Refueling Family</b>	VBMXR0180G05		<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)				
<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	--	0.20	0.011

## Certification Summary Information Report

Test Group	VBMXT04.4S6M	Evaporative/Refueling Family	VBMXR0180G05
<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	VBMXT04.4S6M	Evaporative/Refueling Family		VBMXR0180G05
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		VBMXT04.4S6M	Evaporative/Refueling Family		VBMXR0180G05
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	