

Application for Certification

Model Year: 2027
Manufacturer Name: BMW

Test Group: VBMXV00.0G6C
Test Group Description: electric, BEV

Vehicle Class: EPA
LDV

Applicable Standards: EPA
FTP Standard: Tier 4 - Bin 0
SFTP Standard: not applicable

Carlines Covered: i5 M60 xDrive Sedan (19" Wheels), i5 M60 xDrive Sedan (20" Wheels),
i5 M60 xDrive Sedan (21" Wheels)

Comprehensive List of Tests:

Multi-Cycle-Test:

Model	VID	CFG	Road Load CFG	Multi-Cycle-Test
i5 M60 xDrive Sedan (19" Wheels)	CU56890	00	41	TBMX10091926
i5 M60 xDrive Sedan (20" Wheels)	CU56890	01	42	TBMX10091927
i5 M60 xDrive Sedan (20" Wheels)	CU56890	02	43	TBMX10091928
i5 M60 xDrive Sedan (21" Wheels)	CU56890	03	44	TBMX10091929

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

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1. Correspondence and Communications

1.1. Authorized Persons Refer to Common Section

1.2. Certificate Information Refer to Common Section

1.3. Primary certification contact:

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

2. Durability Group Description

2.1. not applicable

3. Evaporative / Refueling Family Description

not applicable

4. Durability Procedure Description

not applicable

5. Test Group Description

- | | | |
|--------|-------------------------------------|---------------------|
| 5.1. | Test Group Name | VBMXV00.0G6C |
| 5.2. | Electric Vehicle System Description | |
| 5.2.1. | Electric Motor | Refer to Section 12 |
| 5.2.2. | Battery | Refer to Section 12 |
| 5.3. | Vehicle class | EPA |
| | | LDV |
| 5.4. | Emission standards class | Tier 4 - Bin 0 |

6. Test Vehicle Description

6.1. Test Vehicle Description

VID	CFG	Carline	Model	Trans Type	Road Load CFG
CU56890	00	412	i5 M60 xDrive Sedan (19" Wheels)	A-1	41
CU56890	01	413	i5 M60 xDrive Sedan (20" Wheels)	A-1	42
CU56890	02	413	i5 M60 xDrive Sedan (20" Wheels)	A-1	43
CU56890	03	414	i5 M60 xDrive Sedan (21" Wheels)	A-1	44

For a description of the selected drive modes refer to Section 12

Test parameter are described in the EV-CIS vehicle information

Road Load Configuration Description

X_	means number of tire groups used for this model
41	Road Load configuration
42	Road Load configuration
43	Road Load configuration
44	Road Load configuration

For complete vehicle description, refer to Certification Summary Information Report Sheet, enclosed in Section 7 of this application.

Selection of vehicles carried out according to 40 CFR §86.1828-01(a).

7. Test results

Certification Summary Information Report submitted to EV-CIS

see attachment:
CSI-VBMXV00.0G6C

The certified E-Range is given in the respective test information.

8. Statements**8.1 Emission Testing Waiver Statements**

not applicable

8.2 Compliance Statements

Break-In Period Vehicle, Battery, Fuel Cell

According to EPA CD-2021-12 the test vehicles are stabilized for certification testing by aging at least to 2,000 miles. Test vehicle and the battery, in addition the fuel cell if applicable, that power the vehicle during testing are aged as one unit at the same time for the same number of miles. Aging is done by using the SRC cycle.

Electric Vehicle Compliance

According to 40 CFR §86.1829-15 (f) we state as the manufacturer, consistent with good engineering judgment, that all vehicles included in this application comply with all the emission standards and related requirements of Part 86, subpart S.

9. OBD System Description

not applicable

10. Description of Alternate-fueled Vehicles

not applicable

11. Auxiliary Emission Control Devices (AECD) descriptions

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

12. Description of vehicles and test parameters covered by certificate

12.1. Vehicle Parameters

12.1.1. Vehicle Information

Model Name	Carline	Trans	Vehicle Class	VCW [lbs]	ETW [lbs]	GVW [lbs]
i5 M60 xDrive Sedan (19" Wheels)	412	A (A)	LDV	5225	5500	6404
i5 M60 xDrive Sedan (20" Wheels)	413	A (A)	LDV	5225	5500	6404
i5 M60 xDrive Sedan (21" Wheels)	414	A (A)	LDV	5225	5500	6404

12.1.2. Drive Train Information

Model Name	Carline	Trans	Gear	Engine Code	Axle ratio	
					front	rear
i5 M60 xDrive Sedan (19" Wheels)	412	A (A)	1	XE2A02N1G60X	8.77	9.37
i5 M60 xDrive Sedan (20" Wheels)	413	A (A)	1	XE2A02N1G60X	8.77	9.37
i5 M60 xDrive Sedan (21" Wheels)	414	A (A)	1	XE2A02N1G60X	8.77	9.37

12.1.3. Tire Information

Modell	Carline	Trans	Road Load CFG	Tire Front	Tire Rear
i5 M60 xDrive Sedan (19" Wheels)	412	A	41	245/45 R19 102Y STD	275/40 R19 105Y STD
i5 M60 xDrive Sedan (20" Wheels)	413	A	42	245/40 R20 99Y STD	275/35 R20 102Y STD
			43	245/40 R20 99H M+S STD	275/35 R20 102H M+S STD
i5 M60 xDrive Sedan (21" Wheels)	414	A	44	255/35 R21 101Y STD	285/30 R21 103Y STD

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

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

12.1.4. Certification Region

FA

12.2. Test Parameters

12.2.1. Engine Starting Procedures

Refer to Common Section

12.2.2. Shift Schedules

not applicable

12.2.3. Dynamometer loading information

12.2.3.1. Sort of dynamometer

all wheel roll

12.2.3.2. Electric Dynamometer Coefficients and Tires

Modell	Carline	Trans	Road Load CFG	A [lbf]	B [lbf/mph]	C [lbf/mph ²]	a [lbf]	b [lbf/mph]	c [lbf/mph ²]	TRLHP
i5 M60 xDrive Sedan (19" Wheels)	412	A	41	40.3	0.157	0.01651	2.2	-0.062	0.01697	11.9
i5 M60 xDrive Sedan (20" Wheels)	413	A	42	38.9	0.153	0.01866	1.4	-0.086	0.01945	12.4
i5 M60 xDrive Sedan (20" Wheels)	413	A	43	42.2	0.162	0.01815	1.6	0.031	0.01797	12.8
i5 M60 xDrive Sedan (21" Wheels)	414	A	44	45.1	0.172	0.01818	4.5	0.034	0.01818	13.2

Modell	Carline	Trans	Road Load CFG	N/V front	N/V rear	Grill Shutter
i5 M60 xDrive Sedan (19" Wheels)	412	A	41	109.8	117.3	Yes
i5 M60 xDrive Sedan (20" Wheels)	413	A	42	109.8	117.3	Yes
i5 M60 xDrive Sedan (20" Wheels)	413	A	43	109.8	117.3	Yes
i5 M60 xDrive Sedan (21" Wheels)	414	A	44	109.8	117.3	Yes

Road Load Configuration Description

X_	means number of tire groups used for this model
41	Road Load configuration
42	Road Load configuration
43	Road Load configuration
44	Road Load configuration

12.3. Electric vehicle system description

12.3.1 Description of electric motor

Model Name	Type	Front Power (peak) [kW]	Max. torque [Nm]	Type	Rear Power (peak) [kW]	Max. torque [Nm]
i5 M60 xDrive Sedan (19" Wheels)	Separately excited synchronous motor	200 @ 8000	365	Separately excited synchronous motor	250 @ 8000	430
i5 M60 xDrive Sedan (20" Wheels)	Separately excited synchronous motor	200 @ 8000	365	Separately excited synchronous motor	250 @ 8000	430
i5 M60 xDrive Sedan (21" Wheels)	Separately excited synchronous motor	200 @ 8000	365	Separately excited synchronous motor	250 @ 8000	430

12.3.2. Description of batteries

Model Name	System Chemistry	Capacity (C) [Ah]	Energy Capacity (E) [kWh]	Nominal Voltage [V]	Min. Voltage Pack [V]	Number of Packs	Number of Modules	Number of Battery Cells
i5 M60 xDrive Sedan (19" Wheels)	Lithium-Ionen	210.6	83.90	398.5	302.4	1	7	324
i5 M60 xDrive Sedan (20" Wheels)	Lithium-Ionen	210.6	83.90	398.5	302.4	1	7	324
i5 M60 xDrive Sedan (21" Wheels)	Lithium-Ionen	210.6	83.90	398.5	302.4	1	7	324

Model Name	Cell format	Min. Voltage Cell [V]	Weight [kg]	Specific Energy Density [Wh/kg]	Chemistry Identifier
i5 M60 xDrive Sedan (19" Wheels)	prismatic	2.80	551.2	152	Li MM(NCA) - C.F
i5 M60 xDrive Sedan (20" Wheels)	prismatic	2.80	551.2	152	Li MM(NCA) - C.F
i5 M60 xDrive Sedan (21" Wheels)	prismatic	2.80	551.2	152	Li MM(NCA) - C.F

Battery specific energy data are determined in accordance with U.S. Advanced Battery Consortium's Electric Vehicle Battery Procedure No. 2 (Constant Current Discharge Test Series).

12.3.3. Description of thermal management

battery	Component	Medium
	electric heater	coolant
	chiller (heat exchanger) evaporator	refrigerant / coolant
cooling module	radiator / fan	air / coolant
	condenser	air or coolant / refrigerant

electric motor	chiller (heat exchanger) evaporator	refrigerant / coolant
passenger compartment	evaporator	refrigerant / air
	electric heater	coolant
	heat exchanger	coolant / air

12.3.4. Description of battery charger

The charger is capable of charging with different rates. For each charging power, the following approximate charge rates apply:

Model Name	Current Type Charging Source	Charging Power [kW]	Voltage [V]	Rated Current [A]	Charging Rates [hh:mm]
i5 M60 xDrive Sedan (19" Wheels) i5 M60 xDrive Sedan (20" Wheels) i5 M60 xDrive Sedan (21" Wheels)	AC	1.4	120	12	75:15
i5 M60 xDrive Sedan (19" Wheels) i5 M60 xDrive Sedan (20" Wheels) i5 M60 xDrive Sedan (21" Wheels)	AC	7.6	240	32	12:15
i5 M60 xDrive Sedan (19" Wheels) i5 M60 xDrive Sedan (20" Wheels) i5 M60 xDrive Sedan (21" Wheels)	AC	9.6	240	40	9:45
i5 M60 xDrive Sedan (19" Wheels) i5 M60 xDrive Sedan (20" Wheels) i5 M60 xDrive Sedan (21" Wheels)	AC	11.5	240	48	8:00

Model Name	Current Type Charging Source	Max. Charging Power [kW]
i5 M60 xDrive Sedan (19" Wheels) i5 M60 xDrive Sedan (20" Wheels) i5 M60 xDrive Sedan (21" Wheels)	DC	205

The conductive charging port meets SAE J3400 (NACS).

12.4. Information on driver selectable modes for Test Vehicle

VID	Drive Mode
CU56890	FTP and HWY depleting testing is done in drive mode "Personal" (comfortable) and drive selector "D". Recuperation settings have no influence on energy consumption and E-range at dynamometer testing.

13. Projected Sales

Refer to Common Section for Model Year 2027

14. Request for Certification

We herewith apply for the Federal Certificate of conformity for the Test Group VBMXV00.0G6C.

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



Dr. Bernd Ofner

15. Other Information

15.1. Vehicle Emission Control Information Label

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

The VECI label is attached to the engine hood.

Refer to Section 17, Attachment

Carline	Model Name	VECI Label
412	i5 M60 xDrive Sedan (19" Wheels)	see attachment: 03VE-VG6C-01
413	i5 M60 xDrive Sedan (20" Wheels)	
414	i5 M60 xDrive Sedan (21" Wheels)	

17. Attachment

- | | | |
|------|--|-------------------------------------|
| 17.1 | VECI Label | see attachment: 03VE-VG6C-01 |
| 17.2 | Certification Summary Information Report | see attachment:
CSI-VBMXV00.0G6C |

DRAFT - Inverted Representation

	Bayerische Motoren Werke AG	
VEHICLE EMISSION CONTROL INFORMATION		
Conforms to regulations:		MY 2027
U.S. EPA: Tier 4 - Bin 0 LDV		Fuel: electricity Li+
California:	Conforms to U.S. EPA regulations and is certified for sale in California	Fuel: electricity Li+
No adjustments needed.		
Group: VBMXV00.0G6C		8 900 560

Original representation

Base: Black
Characters: Silver

Certification Summary Information Report

Manufacturer	BMW	Manufacturer Code	BMX
Test Group	VBMXV00.0G6C	Evaporative/Refueling Family	--
Certificate Number	--	CARB Executive Order #	--
Certificate Issue Date	--	Certificate Revision Date	--
Certificate Effective Date	--	Conditional Certificate	--
CSI Revision #	--	CSI Submission/Revision Date	04/02/2026 07:10:36 AM
Model Year	2027		

Test Group Information

CSI Type	New	Running Change Reference Number	--
GHG Exempt Status	Not Exempt		

Drive Sources and Fuel(s)

Drive Source #1: Electric Motor

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

Hybrid Indicator	No		
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	Yes
Multiple Fuel Combustion	--	Off-board Charge Capable Indicator	Yes
Fuel Cell Indicator	No	EPA Vehicle Class	LDV
Federal Clean Fuel Vehicle	Yes	Federal Clean Fuel Vehicle Standard	ZEV
Federal Clean Fuel Vehicle ILEV	No	California Partial Zero Emissions Vehicle Indicator	--
Durability Group Name	VBMXEEVNNBEV	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	--	CAP2000 Conditional Certificate?	N/A
Independent Commercial Importer?	--	Alternative Fuel Converter Certificate?	--
SFTP Federal Composite Compliance Identifier	Not Applicable	SFTP Tier 2 Composite CO Option	No
SFTP LEV-III Composite Compliance Indicator	No		
OBD Compliance Type	CARB	OBD Demonstration Vehicle Test Group	VBMXV00.0G6C
Test Group OBD Compliance Level	Full - no deficiencies	Number of Test Group OBD Deficiencies	0
OBD Deficiencies Comments	--		
Mfr Test Group Comments	--		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group	VBMXV00.0G6C			Evaporative/Refueling Family			--				
Models Covered by this Certificate											
Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - Type	- # of Gears	Trans - Lockup				
BMW	1 - BMW	412 - i5 M60 xDrive Sedan (19" Wheels)	Federal	All Wheel Drive	Automatic	1	No				
BMW	1 - BMW	414 - i5 M60 xDrive Sedan (21" Wheels)	Federal	All Wheel Drive	Automatic	1	No				
BMW	1 - BMW	413 - i5 M60 xDrive Sedan (20" Wheels)	Federal	All Wheel Drive	Automatic	1	No				
Engine Description											
Hybrid Type		--		Hybrid Description		--					
Engine Type		--		Mfr Engine Description		--					
Engine Block Arrangement		--		Mfr Engine Block Arrangement Description		--					
Camless Valvetrain Indicator		--		Oil Viscosity/Classification							
Number of Cylinders/Rotors		--		Mechanically Variable Compression Ratio Indicator		--					
After Treatment Device(s) (ATD)											
Mfr After Treatment Device (ATD) Comments		--									
Direct Ozone Reduction (DOR) Device		--									
Mfr Emission Control Device Comments		--									
Official Test Numbers											
Test Group	Fuel	FTP	US06	SC03	Cold CO	Highway	EPA City Litmus Value	EPA City Litmus Threshold	EPA Highway Litmus Value	EPA Highway Litmus Threshold	CREE Weighting Factor
Electricity		--	--	--	--	--	--	--	--	--	--

Certification Summary Information Report

Test Group	VBMXV00.0G6C	Evaporative/Refueling Family	--
Hybrid Electric Vehicle And Fuel Cell Information			
Rechargable Energy Storage System	Battery(s)	Rechargable Energy Storage System, if Other	--
Battery Type	Lithium Ion	Number of Battery Packs	1
Total Voltage of Battery Packs	399	Battery Energy Capacity	210.6
Battery Specific Energy	152	Battery Charger Type	On-Board
Number of Capacitors	--	Capacitor Rating (In Farads)	--
Mfr Capacitor Comments	--		
Hydraulic System Description	--		
Regenerative Braking Type	Electrical Regen Brake		
Regenerative Braking Source	Both	Driver Controlled Regenerative Braking	Yes
Mfr Regenerative Braking Description	--		
Drive Motor(s)/Generator(s)	2		
Motor/Generator Type 1	EESM	Rated Motor/Generator Power	200
Motor/Generator Type 2	EESM	Rated Motor/Generator Power	250
Mfr Fuel Cell Description	--		
Fuel Cell On-Board H2 Storage Capacity (kg)	--	Usable H2 Fill Capacity (kg)	--
Mfr Hybrid Electric/ Electric Vehicle Comments	Motor/Generator Type: externally excited synchronuous machine (EESM)		

Certification Summary Information Report

Test Group	VBMXV00.0G6C	Evaporative/Refueling Family	--						
Emission Data Vehicle Information									
Vehicle ID / Configuration	CU56890 / 0	Manufacturer Vehicle Configuration Number	0						
Original Test Group Name	TBMXV00.0G6C	Original Evaporative/Refueling Family	--						
Original Test Vehicle Model Year	2026								
Vehicle Model									
Represented Test Vehicle Make	BMW	Represented Test Vehicle Model	i5 M60 xDrive Sedan (19" Wheels)						
Leak Family Details									
Leak Family Identifier	--	Leak Family Name	--						
Drive Sources and Fuel System Details									
	<table border="1"> <tr> <th>Drive Source and Fuel#</th><th>Drive Source</th><th>Fuel</th></tr> <tr> <td>1</td><td>Electric Motor</td><td>Electricity</td></tr> </table>	Drive Source and Fuel#	Drive Source	Fuel	1	Electric Motor	Electricity		
Drive Source and Fuel#	Drive Source	Fuel							
1	Electric Motor	Electricity							
Hybrid Indicator	No								
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	Yes								
Odometer Correction -- Initial	0	Odometer Correction Factor	1						
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles								
Odometer Correction Units	Miles								
Engine Code	XE2A02N1G60X	Rated Horsepower	593						
Displacement (liters)	0.001								
Air Aspiration Method	Naturally Aspirated	Air Aspiration Method, if 'Other'							
Number of Air Aspiration Devices	--	Air Aspiration Device Configuration	--						
Charge Air Cooler Type	--	Drive Mode While Testing	All Wheel Drive						
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)						
Curb Weight (lbs)	5225	Equivalent Test Weight (pounds)	5500						
GVWR (lbs)	6404	N/V Ratio	1						
Axle Ratio	1								
Transmission Type	Automatic	# of Transmission Gears	1						
Transmission Lockup	No	Creep Gear	No						

Certification Summary Information Report

Test Group	VBMXV00.0G6C			Evaporative/Refueling Family			--
Dynamometer Coefficients:							
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	40.3	0.157	0.01651	2.2	-0.062	0.01697	11.9
Cold CO	40.3	0.157	0.01651	2.2	-0.062	0.01697	N/A
US06	40.3	0.157	0.01651	2.2	-0.062	0.01697	N/A
Emission Control Device Comments	--						
Manufacturer Test Vehicle Comments	vi_CU56890_00_FEDV_i5 M60 xDrive Sedan (19" Wheels)_A_ETW-5500_RG41_default mode_D; Axle Ratio front: 8.774, Axle Ratio rear: 9.374; N/V Ratio front: 109.8, N/V Ratio rear: 117.3						

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Certification Summary Information Report

Test Group	VBMXV00.0G6C	Evaporative/Refueling Family	--
		Test Result/Emission Name	Unrounded Test Result
		Actual Distance Driven (miles)	10.268
		Carbon dioxide	0
		Carbon-Related Exhaust Emissions	0
		Drive Trace Absolute Speed Change Rating	-1.012
		Drive Trace Energy Economy Rating	-0.814
		Drive Trace Inertia Work Ratio Rating	-1.094
		Integrated DC KW-HRS	2.2372
		Manufacturer Fuel Economy	21.7877
Charge Depleting Bag/Phase #3			
		Test Result/Emission Name	Unrounded Test Result
		Actual Distance Driven (miles)	7.424
		Carbon dioxide	0
		Carbon-Related Exhaust Emissions	0
		Drive Trace Absolute Speed Change Rating	-1.2
		Drive Trace Energy Economy Rating	-1.8
		Drive Trace Inertia Work Ratio Rating	-1.737
		Integrated DC KW-HRS	1.6105
		Manufacturer Fuel Economy	21.6934
Charge Depleting Bag/Phase #4			
		Test Result/Emission Name	Unrounded Test Result
		Actual Distance Driven (miles)	243.113
		Carbon dioxide	0
		Carbon-Related Exhaust Emissions	0
		Drive Trace Absolute Speed Change Rating	99.99
		Drive Trace Energy Economy Rating	99.99
		Drive Trace Inertia Work Ratio Rating	99.99
		Integrated DC KW-HRS	62.5029
		Manufacturer Fuel Economy	25.7094
Charge Depleting Bag/Phase #5			

Certification Summary Information Report

Test Group	VBMXV00.0G6C	Evaporative/Refueling Family	--																		
	<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>7.431</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>-1.32</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-2.099</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>-1.611</td></tr><tr><td>Integrated DC KW-HRS</td><td>1.5304</td></tr><tr><td>Manufacturer Fuel Economy</td><td>20.5955</td></tr></table>			Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	7.431	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	-1.32	Drive Trace Energy Economy Rating	-2.099	Drive Trace Inertia Work Ratio Rating	-1.611	Integrated DC KW-HRS	1.5304	Manufacturer Fuel Economy	20.5955
Test Result/Emission Name	Unrounded Test Result																				
Actual Distance Driven (miles)	7.431																				
Carbon dioxide	0																				
Carbon-Related Exhaust Emissions	0																				
Drive Trace Absolute Speed Change Rating	-1.32																				
Drive Trace Energy Economy Rating	-2.099																				
Drive Trace Inertia Work Ratio Rating	-1.611																				
Integrated DC KW-HRS	1.5304																				
Manufacturer Fuel Economy	20.5955																				
Charge Depleting Bag/Phase #6																					
	<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>10.273</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>-0.975</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.729</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>-0.921</td></tr><tr><td>Integrated DC KW-HRS</td><td>2.1897</td></tr><tr><td>Manufacturer Fuel Economy</td><td>21.3162</td></tr></table>			Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	10.273	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	-0.975	Drive Trace Energy Economy Rating	-0.729	Drive Trace Inertia Work Ratio Rating	-0.921	Integrated DC KW-HRS	2.1897	Manufacturer Fuel Economy	21.3162
Test Result/Emission Name	Unrounded Test Result																				
Actual Distance Driven (miles)	10.273																				
Carbon dioxide	0																				
Carbon-Related Exhaust Emissions	0																				
Drive Trace Absolute Speed Change Rating	-0.975																				
Drive Trace Energy Economy Rating	-0.729																				
Drive Trace Inertia Work Ratio Rating	-0.921																				
Integrated DC KW-HRS	2.1897																				
Manufacturer Fuel Economy	21.3162																				
Charge Depleting Bag/Phase #7																					
	<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>7.424</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>-2.002</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-2.461</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>-2.852</td></tr><tr><td>Integrated DC KW-HRS</td><td>1.5594</td></tr><tr><td>Manufacturer Fuel Economy</td><td>21.0048</td></tr></table>			Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	7.424	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	-2.002	Drive Trace Energy Economy Rating	-2.461	Drive Trace Inertia Work Ratio Rating	-2.852	Integrated DC KW-HRS	1.5594	Manufacturer Fuel Economy	21.0048
Test Result/Emission Name	Unrounded Test Result																				
Actual Distance Driven (miles)	7.424																				
Carbon dioxide	0																				
Carbon-Related Exhaust Emissions	0																				
Drive Trace Absolute Speed Change Rating	-2.002																				
Drive Trace Energy Economy Rating	-2.461																				
Drive Trace Inertia Work Ratio Rating	-2.852																				
Integrated DC KW-HRS	1.5594																				
Manufacturer Fuel Economy	21.0048																				
Charge Depleting Bag/Phase #8																					

Certification Summary Information Report

Test Group	VBMXV00.0G6C	Evaporative/Refueling Family	--																		
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>43.138</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>99.99</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>99.99</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>99.99</td></tr><tr><td>Integrated DC KW-HRS</td><td>11.1708</td></tr><tr><td>Manufacturer Fuel Economy</td><td>25.8954</td></tr></table>				Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	43.138	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	99.99	Drive Trace Energy Economy Rating	99.99	Drive Trace Inertia Work Ratio Rating	99.99	Integrated DC KW-HRS	11.1708	Manufacturer Fuel Economy	25.8954
Test Result/Emission Name	Unrounded Test Result																				
Actual Distance Driven (miles)	43.138																				
Carbon dioxide	0																				
Carbon-Related Exhaust Emissions	0																				
Drive Trace Absolute Speed Change Rating	99.99																				
Drive Trace Energy Economy Rating	99.99																				
Drive Trace Inertia Work Ratio Rating	99.99																				
Integrated DC KW-HRS	11.1708																				
Manufacturer Fuel Economy	25.8954																				
Manufacturer Test Comments		01_MCT_CU56890_00_FEDV_i5 M60 xDrive Sedan (19" Wheels)_A_ETW-5500_RG41_default mode_D; MCT UBE energy = 84470 Wh																			
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	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Other	CREE	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Other	CREE	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Other	CREE	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Other	CREE	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Other	CREE	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Other	CREE	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Other	CREE	0	--	--	--	--	1	0	--	--									

Certification Summary Information Report

Test Group	VBMXV00.0G6C	Evaporative/Refueling Family	--					
Emission Data Vehicle Information								
Vehicle ID / Configuration	CU56890 / 1	Manufacturer Vehicle Configuration Number	0					
Original Test Group Name	TBMXV00.0G6C	Original Evaporative/Refueling Family	--					
Original Test Vehicle Model Year	2026							
Vehicle Model								
Represented Test Vehicle Make	BMW	Represented Test Vehicle Model	i5 M60 xDrive Sedan (20" Wheels)					
Leak Family Details								
Leak Family Identifier	--	Leak Family Name	--					
Drive Sources and Fuel System Details								
	<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> </tbody> </table>	Drive Source and Fuel#	Drive Source	Fuel	1	Electric Motor	Electricity	
Drive Source and Fuel#	Drive Source	Fuel						
1	Electric Motor	Electricity						
Hybrid Indicator	No							
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	Yes							
Odometer Correction -- Initial	0	Odometer Correction Factor	1					
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles							
Odometer Correction Units	Miles							
Engine Code	XE2A02N1G60X	Rated Horsepower	593					
Displacement (liters)	0.001							
Air Aspiration Method	Naturally Aspirated	Air Aspiration Method, if 'Other'						
Number of Air Aspiration Devices	--	Air Aspiration Device Configuration	--					
Charge Air Cooler Type	--	Drive Mode While Testing	All Wheel Drive					
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)					
Curb Weight (lbs)	5225	Equivalent Test Weight (pounds)	5500					
GVWR (lbs)	6404	N/V Ratio	1					
Axle Ratio	1							
Transmission Type	Automatic	# of Transmission Gears	1					
Transmission Lockup	No	Creep Gear	No					

Certification Summary Information Report

Test Group	VBMXV00.0G6C			Evaporative/Refueling Family			--
Dynamometer Coefficients:							
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	38.9	0.153	0.01866	1.4	-0.086	0.01945	12.4
Cold CO	38.9	0.153	0.01866	1.4	-0.086	0.01945	N/A
US06	38.9	0.153	0.01866	1.4	-0.086	0.01945	N/A
Emission Control Device Comments	--						
Manufacturer Test Vehicle Comments	vi_CU56890_01_FEDV_i5 M60 xDrive Sedan (20" Wheels)_A_ETW-5500_RG42_default mode_D; Axle Ratio front: 8.774, Axle Ratio rear: 9.374; N/V Ratio front: 109.8, N/V Ratio rear: 117.3						

Certification Summary Information Report

Test Group	VBMXV00.0G6C	Evaporative/Refueling Family	--
Test #	TBMX10091927	Test Procedure	77 - Multi-Cycle Test (MCT)
Exhaust Test # for this Evap Test	--	Test Fuel Type	62 - Electricity
Test Date	08/06/2025	Fuel	Electricity
Fuel Batch ID	--	Fuel Calibration Number	--
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Assigned
Verify Test Lab ID	EETZ Emissions Lab		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	8453	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
PHEV/EV Charge Depleting Test Information			
Recharge Event Voltage	230	Recharge Event Energy (kiloWatt-hours)	95.131
Charge Depleting Range (Calculated miles)	397.203	Charge Depleting Range (Actual miles)	397.203
Charge Depleting Range Highway (Calculated miles)	374.901	Derived 5-Cycle Coefficient Model Year	--
All Electric Range Unadjusted (miles)	--	Equivalent All Electric Range (miles)	397.203
Number of Charge Depleting Bags/Phases Conducted	8	Transition Bag/Phase Number	--
Charge Depleting Bag/Phase #1			
Test Result/Emission Name		Unrounded Test Result	
Actual Distance Driven (miles)		7.418	
Carbon dioxide		0	
Carbon-Related Exhaust Emissions		0	
Drive Trace Absolute Speed Change Rating		-1.257	
Drive Trace Energy Economy Rating		-1.727	
Drive Trace Inertia Work Ratio Rating		-1.717	
Integrated DC KW-HRS		1.6939	
Manufacturer Fuel Economy		22.8337	
Charge Depleting Bag/Phase #2			

Certification Summary Information Report

Test Group	VBMXV00.0G6C	Evaporative/Refueling Family	--
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Test Result/Emission Name	Unrounded Test Result
Actual Distance Driven (miles)	10.248
Carbon dioxide	0
Carbon-Related Exhaust Emissions	0
Drive Trace Absolute Speed Change Rating	2.58
Drive Trace Energy Economy Rating	-0.926
Drive Trace Inertia Work Ratio Rating	3.39
Integrated DC KW-HRS	2.3514
Manufacturer Fuel Economy	22.9453

Charge Depleting Bag/Phase #3

Test Result/Emission Name	Unrounded Test Result
Actual Distance Driven (miles)	7.424
Carbon dioxide	0
Carbon-Related Exhaust Emissions	0
Drive Trace Absolute Speed Change Rating	-1.63
Drive Trace Energy Economy Rating	-2.468
Drive Trace Inertia Work Ratio Rating	-2.279
Integrated DC KW-HRS	1.6241
Manufacturer Fuel Economy	21.8755

Charge Depleting Bag/Phase #4

Test Result/Emission Name	Unrounded Test Result
Actual Distance Driven (miles)	227.266
Carbon dioxide	0
Carbon-Related Exhaust Emissions	0
Drive Trace Absolute Speed Change Rating	99.99
Drive Trace Energy Economy Rating	99.99
Drive Trace Inertia Work Ratio Rating	99.99
Integrated DC KW-HRS	62.3278
Manufacturer Fuel Economy	27.4251

Charge Depleting Bag/Phase #5

Certification Summary Information Report

Test Group	VBMXV00.0G6C	Evaporative/Refueling Family	--																		
	<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>7.425</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>-1.035</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-1.918</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>-1.287</td></tr><tr><td>Integrated DC KW-HRS</td><td>1.5353</td></tr><tr><td>Manufacturer Fuel Economy</td><td>20.6777</td></tr></table>			Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	7.425	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	-1.035	Drive Trace Energy Economy Rating	-1.918	Drive Trace Inertia Work Ratio Rating	-1.287	Integrated DC KW-HRS	1.5353	Manufacturer Fuel Economy	20.6777
Test Result/Emission Name	Unrounded Test Result																				
Actual Distance Driven (miles)	7.425																				
Carbon dioxide	0																				
Carbon-Related Exhaust Emissions	0																				
Drive Trace Absolute Speed Change Rating	-1.035																				
Drive Trace Energy Economy Rating	-1.918																				
Drive Trace Inertia Work Ratio Rating	-1.287																				
Integrated DC KW-HRS	1.5353																				
Manufacturer Fuel Economy	20.6777																				
Charge Depleting Bag/Phase #6																					
	<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>10.248</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>0.719</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-1.214</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>1.068</td></tr><tr><td>Integrated DC KW-HRS</td><td>2.2665</td></tr><tr><td>Manufacturer Fuel Economy</td><td>22.1157</td></tr></table>			Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	10.248	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	0.719	Drive Trace Energy Economy Rating	-1.214	Drive Trace Inertia Work Ratio Rating	1.068	Integrated DC KW-HRS	2.2665	Manufacturer Fuel Economy	22.1157
Test Result/Emission Name	Unrounded Test Result																				
Actual Distance Driven (miles)	10.248																				
Carbon dioxide	0																				
Carbon-Related Exhaust Emissions	0																				
Drive Trace Absolute Speed Change Rating	0.719																				
Drive Trace Energy Economy Rating	-1.214																				
Drive Trace Inertia Work Ratio Rating	1.068																				
Integrated DC KW-HRS	2.2665																				
Manufacturer Fuel Economy	22.1157																				
Charge Depleting Bag/Phase #7																					
	<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>7.43</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>-1.515</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-2.197</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>-1.914</td></tr><tr><td>Integrated DC KW-HRS</td><td>1.5712</td></tr><tr><td>Manufacturer Fuel Economy</td><td>21.1471</td></tr></table>			Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	7.43	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	-1.515	Drive Trace Energy Economy Rating	-2.197	Drive Trace Inertia Work Ratio Rating	-1.914	Integrated DC KW-HRS	1.5712	Manufacturer Fuel Economy	21.1471
Test Result/Emission Name	Unrounded Test Result																				
Actual Distance Driven (miles)	7.43																				
Carbon dioxide	0																				
Carbon-Related Exhaust Emissions	0																				
Drive Trace Absolute Speed Change Rating	-1.515																				
Drive Trace Energy Economy Rating	-2.197																				
Drive Trace Inertia Work Ratio Rating	-1.914																				
Integrated DC KW-HRS	1.5712																				
Manufacturer Fuel Economy	21.1471																				
Charge Depleting Bag/Phase #8																					

Certification Summary Information Report

Test Group	VBMXV00.0G6C	Evaporative/Refueling Family	--																		
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>39.658</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>99.99</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>99.99</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>99.99</td></tr><tr><td>Integrated DC KW-HRS</td><td>11.0969</td></tr><tr><td>Manufacturer Fuel Economy</td><td>27.9813</td></tr></table>				Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	39.658	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	99.99	Drive Trace Energy Economy Rating	99.99	Drive Trace Inertia Work Ratio Rating	99.99	Integrated DC KW-HRS	11.0969	Manufacturer Fuel Economy	27.9813
Test Result/Emission Name	Unrounded Test Result																				
Actual Distance Driven (miles)	39.658																				
Carbon dioxide	0																				
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Drive Trace Inertia Work Ratio Rating	99.99																				
Integrated DC KW-HRS	11.0969																				
Manufacturer Fuel Economy	27.9813																				
Manufacturer Test Comments		01_MCT_CU56890_01_FEDV_i5 M60 xDrive Sedan (20" Wheels)_A_ETW-5500_RG42_default mode_D; MCT UBE energy = 84467 Wh																			
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	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Other	CREE	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Other	CREE	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Other	CREE	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Other	CREE	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Other	CREE	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Other	CREE	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Other	CREE	0	--	--	--	--	1	0	--	--									

Certification Summary Information Report

Test Group	VBMXV00.0G6C	Evaporative/Refueling Family	--					
Emission Data Vehicle Information								
Vehicle ID / Configuration	CU56890 / 2	Manufacturer Vehicle Configuration Number	0					
Original Test Group Name	TBMXV00.0G6C	Original Evaporative/Refueling Family	--					
Original Test Vehicle Model Year	2026							
Vehicle Model								
Represented Test Vehicle Make	BMW	Represented Test Vehicle Model	i5 M60 xDrive Sedan (20" Wheels)					
Leak Family Details								
Leak Family Identifier	--	Leak Family Name	--					
Drive Sources and Fuel System Details								
	<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> </tbody> </table>	Drive Source and Fuel#	Drive Source	Fuel	1	Electric Motor	Electricity	
Drive Source and Fuel#	Drive Source	Fuel						
1	Electric Motor	Electricity						
Hybrid Indicator	No							
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	Yes							
Odometer Correction -- Initial	0	Odometer Correction Factor	1					
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles							
Odometer Correction Units	Miles							
Engine Code	XE2A02N1G60X	Rated Horsepower	593					
Displacement (liters)	0.001							
Air Aspiration Method	Naturally Aspirated	Air Aspiration Method, if 'Other'						
Number of Air Aspiration Devices	--	Air Aspiration Device Configuration	--					
Charge Air Cooler Type	--	Drive Mode While Testing	All Wheel Drive					
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)					
Curb Weight (lbs)	5225	Equivalent Test Weight (pounds)	5500					
GVWR (lbs)	6404	N/V Ratio	1					
Axle Ratio	1							
Transmission Type	Automatic	# of Transmission Gears	1					
Transmission Lockup	No	Creep Gear	No					

Certification Summary Information Report

Test Group	VBMXV00.0G6C			Evaporative/Refueling Family			--
Dynamometer Coefficients:							
Target Coefficients				Set Coefficients			
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
City/Highway/Evap	42.2	0.162	0.01815	1.6	0.031	0.01797	12.8
Cold CO	42.2	0.162	0.01815	1.6	0.031	0.01797	N/A
US06	42.2	0.162	0.01815	1.6	0.031	0.01797	N/A
Emission Control Device Comments	--						
Manufacturer Test Vehicle Comments	vi_CU56890_02_FEDV_i5 M60 xDrive Sedan (20" Wheels)_A_ETW-5500_RG43_default mode_D; Axle Ratio front: 8.774, Axle Ratio rear: 9.374; N/V Ratio front: 109.8, N/V Ratio rear: 117.3						

Certification Summary Information Report

Test Group	VBMXV00.0G6C	Evaporative/Refueling Family	--
Test #	TBMX10091928	Test Procedure	77 - Multi-Cycle Test (MCT)
Exhaust Test # for this Evap Test	--	Test Fuel Type	62 - Electricity
Test Date	08/01/2025	Fuel	Electricity
Fuel Batch ID	--	Fuel Calibration Number	--
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Assigned
Verify Test Lab ID	EETZ Emissions Lab		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	7878	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
PHEV/EV Charge Depleting Test Information			
Recharge Event Voltage	230	Recharge Event Energy (kiloWatt-hours)	95.419
Charge Depleting Range (Calculated miles)	386.855	Charge Depleting Range (Actual miles)	386.855
Charge Depleting Range Highway (Calculated miles)	371.216	Derived 5-Cycle Coefficient Model Year	--
All Electric Range Unadjusted (miles)	--	Equivalent All Electric Range (miles)	386.855
Number of Charge Depleting Bags/Phases Conducted	8	Transition Bag/Phase Number	--
Charge Depleting Bag/Phase #1			
Test Result/Emission Name		Unrounded Test Result	
Actual Distance Driven (miles)		7.45	
Carbon dioxide		0	
Carbon-Related Exhaust Emissions		0	
Drive Trace Absolute Speed Change Rating		-0.489	
Drive Trace Energy Economy Rating		-1.187	
Drive Trace Inertia Work Ratio Rating		-0.884	
Integrated DC KW-HRS		1.7562	
Manufacturer Fuel Economy		23.5719	
Charge Depleting Bag/Phase #2			

Certification Summary Information Report

Test Group	VBMXV00.0G6C	Evaporative/Refueling Family	--
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Test Result/Emission Name	Unrounded Test Result
Actual Distance Driven (miles)	10.249
Carbon dioxide	0
Carbon-Related Exhaust Emissions	0
Drive Trace Absolute Speed Change Rating	0.036
Drive Trace Energy Economy Rating	-0.422
Drive Trace Inertia Work Ratio Rating	0.333
Integrated DC KW-HRS	2.3775
Manufacturer Fuel Economy	23.1967

Charge Depleting Bag/Phase #3

Test Result/Emission Name	Unrounded Test Result
Actual Distance Driven (miles)	7.439
Carbon dioxide	0
Carbon-Related Exhaust Emissions	0
Drive Trace Absolute Speed Change Rating	-0.353
Drive Trace Energy Economy Rating	-1.143
Drive Trace Inertia Work Ratio Rating	-0.582
Integrated DC KW-HRS	1.6676
Manufacturer Fuel Economy	22.4177

Charge Depleting Bag/Phase #4

Test Result/Emission Name	Unrounded Test Result
Actual Distance Driven (miles)	225.199
Carbon dioxide	0
Carbon-Related Exhaust Emissions	0
Drive Trace Absolute Speed Change Rating	99.99
Drive Trace Energy Economy Rating	99.99
Drive Trace Inertia Work Ratio Rating	99.99
Integrated DC KW-HRS	62.2272
Manufacturer Fuel Economy	27.632

Charge Depleting Bag/Phase #5

Certification Summary Information Report

Test Group	VBMXV00.0G6C	Evaporative/Refueling Family	--																		
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>7.451</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>-1.051</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-1.332</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>-1.883</td></tr><tr><td>Integrated DC KW-HRS</td><td>1.5873</td></tr><tr><td>Manufacturer Fuel Economy</td><td>21.3023</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	7.451	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	-1.051	Drive Trace Energy Economy Rating	-1.332	Drive Trace Inertia Work Ratio Rating	-1.883	Integrated DC KW-HRS	1.5873	Manufacturer Fuel Economy	21.3023		
Test Result/Emission Name	Unrounded Test Result																				
Actual Distance Driven (miles)	7.451																				
Carbon dioxide	0																				
Carbon-Related Exhaust Emissions	0																				
Drive Trace Absolute Speed Change Rating	-1.051																				
Drive Trace Energy Economy Rating	-1.332																				
Drive Trace Inertia Work Ratio Rating	-1.883																				
Integrated DC KW-HRS	1.5873																				
Manufacturer Fuel Economy	21.3023																				
Charge Depleting Bag/Phase #6																					
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>10.257</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>0.182</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.71</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>0.385</td></tr><tr><td>Integrated DC KW-HRS</td><td>2.2935</td></tr><tr><td>Manufacturer Fuel Economy</td><td>22.3615</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	10.257	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	0.182	Drive Trace Energy Economy Rating	-0.71	Drive Trace Inertia Work Ratio Rating	0.385	Integrated DC KW-HRS	2.2935	Manufacturer Fuel Economy	22.3615		
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Manufacturer Fuel Economy	22.3615																				
Charge Depleting Bag/Phase #7																					
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>7.452</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>0.21</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.69</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>0.266</td></tr><tr><td>Integrated DC KW-HRS</td><td>1.6204</td></tr><tr><td>Manufacturer Fuel Economy</td><td>21.7457</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	7.452	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	0.21	Drive Trace Energy Economy Rating	-0.69	Drive Trace Inertia Work Ratio Rating	0.266	Integrated DC KW-HRS	1.6204	Manufacturer Fuel Economy	21.7457		
Test Result/Emission Name	Unrounded Test Result																				
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Integrated DC KW-HRS	1.6204																				
Manufacturer Fuel Economy	21.7457																				
Charge Depleting Bag/Phase #8																					

Certification Summary Information Report

Test Group	VBMXV00.0G6C	Evaporative/Refueling Family	--																		
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>39.653</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>99.99</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>99.99</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>99.99</td></tr><tr><td>Integrated DC KW-HRS</td><td>11.0299</td></tr><tr><td>Manufacturer Fuel Economy</td><td>27.8162</td></tr></table>				Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	39.653	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	99.99	Drive Trace Energy Economy Rating	99.99	Drive Trace Inertia Work Ratio Rating	99.99	Integrated DC KW-HRS	11.0299	Manufacturer Fuel Economy	27.8162
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Integrated DC KW-HRS	11.0299																				
Manufacturer Fuel Economy	27.8162																				
Manufacturer Test Comments		01_MCT_CU56890_02_FEDV_i5 M60 xDrive Sedan (20" Wheels)_A_ETW-5500_RG43_default mode_D; MCT UBE energy = 84560 Wh																			
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	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Other	CREE	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Other	CREE	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Other	CREE	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Other	CREE	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Other	CREE	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Other	CREE	0	--	--	--	--	1	0	--	--									
Fed	120,000 miles	Other	CREE	0	--	--	--	--	1	0	--	--									

Certification Summary Information Report

Test Group	VBMXV00.0G6C	Evaporative/Refueling Family	--						
Emission Data Vehicle Information									
Vehicle ID / Configuration	CU56890 / 3	Manufacturer Vehicle Configuration Number	0						
Original Test Group Name	TBMXV00.0G6C	Original Evaporative/Refueling Family	--						
Original Test Vehicle Model Year	2026								
Vehicle Model									
Represented Test Vehicle Make	BMW	Represented Test Vehicle Model	i5 M60 xDrive Sedan (21" Wheels)						
Leak Family Details									
Leak Family Identifier	--	Leak Family Name	--						
Drive Sources and Fuel System Details									
	<table border="1"> <tr> <th>Drive Source and Fuel#</th><th>Drive Source</th><th>Fuel</th></tr> <tr> <td>1</td><td>Electric Motor</td><td>Electricity</td></tr> </table>	Drive Source and Fuel#	Drive Source	Fuel	1	Electric Motor	Electricity		
Drive Source and Fuel#	Drive Source	Fuel							
1	Electric Motor	Electricity							
Hybrid Indicator	No								
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	Yes								
Odometer Correction -- Initial	0	Odometer Correction Factor	1						
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles								
Odometer Correction Units	Miles								
Engine Code	XE2A02N1G60X	Rated Horsepower	593						
Displacement (liters)	0.001								
Air Aspiration Method	Naturally Aspirated	Air Aspiration Method, if 'Other'							
Number of Air Aspiration Devices	--	Air Aspiration Device Configuration	--						
Charge Air Cooler Type	--	Drive Mode While Testing	All Wheel Drive						
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)						
Curb Weight (lbs)	5225	Equivalent Test Weight (pounds)	5500						
GVWR (lbs)	6404	N/V Ratio	1						
Axle Ratio	1								
Transmission Type	Automatic	# of Transmission Gears	1						
Transmission Lockup	No	Creep Gear	No						

Certification Summary Information Report

Test Group	VBMXV00.0G6C			Evaporative/Refueling Family			--
Dynamometer Coefficients:							
Target Coefficients				Set Coefficients			
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
City/Highway/Evap	45.1	0.172	0.01818	4.5	0.034	0.01818	13.2
Cold CO	45.1	0.172	0.01818	4.5	0.034	0.01818	N/A
US06	45.1	0.172	0.01818	4.5	0.034	0.01818	N/A
Emission Control Device Comments	--						
Manufacturer Test Vehicle Comments	vi_CU56890_03_FEDV_i5 M60 xDrive Sedan (21" Wheels)_A_ETW-5500_RG44_default mode_D; Axle Ratio front: 8.774, Axle Ratio rear: 9.374; N/V Ratio front: 109.8, N/V Ratio rear: 117.3						

Certification Summary Information Report

Test Group	VBMXV00.0G6C	Evaporative/Refueling Family	--
Test #	TBMX10091929	Test Procedure	77 - Multi-Cycle Test (MCT)
Exhaust Test # for this Evap Test	--	Test Fuel Type	62 - Electricity
Test Date	07/22/2025	Fuel	Electricity
Fuel Batch ID	--	Fuel Calibration Number	--
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Assigned
Verify Test Lab ID	EETZ Emissions Lab		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	5789	Odometer Units	K
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
PHEV/EV Charge Depleting Test Information			
Recharge Event Voltage	230	Recharge Event Energy (kiloWatt-hours)	96.005
Charge Depleting Range (Calculated miles)	375.6	Charge Depleting Range (Actual miles)	375.6
Charge Depleting Range Highway (Calculated miles)	362.094	Derived 5-Cycle Coefficient Model Year	--
All Electric Range Unadjusted (miles)	--	Equivalent All Electric Range (miles)	375.6
Number of Charge Depleting Bags/Phases Conducted	8	Transition Bag/Phase Number	--
Charge Depleting Bag/Phase #1			
Test Result/Emission Name		Unrounded Test Result	
Actual Distance Driven (miles)		7.439	
Carbon dioxide		0	
Carbon-Related Exhaust Emissions		0	
Drive Trace Absolute Speed Change Rating		0.82	
Drive Trace Energy Economy Rating		0.183	
Drive Trace Inertia Work Ratio Rating		1.148	
Integrated DC KW-HRS		1.779	
Manufacturer Fuel Economy		23.9145	
Charge Depleting Bag/Phase #2			

Certification Summary Information Report

Test Group	VBMXV00.0G6C	Evaporative/Refueling Family	--																		
	<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>10.243</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>3.428</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.155</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>4.335</td></tr><tr><td>Integrated DC KW-HRS</td><td>2.4406</td></tr><tr><td>Manufacturer Fuel Economy</td><td>23.826</td></tr></table>			Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	10.243	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	3.428	Drive Trace Energy Economy Rating	-0.155	Drive Trace Inertia Work Ratio Rating	4.335	Integrated DC KW-HRS	2.4406	Manufacturer Fuel Economy	23.826
Test Result/Emission Name	Unrounded Test Result																				
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Integrated DC KW-HRS	2.4406																				
Manufacturer Fuel Economy	23.826																				
Charge Depleting Bag/Phase #3																					
	<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>7.436</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>0.994</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>0.015</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>1.353</td></tr><tr><td>Integrated DC KW-HRS</td><td>1.7201</td></tr><tr><td>Manufacturer Fuel Economy</td><td>23.1316</td></tr></table>			Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	7.436	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	0.994	Drive Trace Energy Economy Rating	0.015	Drive Trace Inertia Work Ratio Rating	1.353	Integrated DC KW-HRS	1.7201	Manufacturer Fuel Economy	23.1316
Test Result/Emission Name	Unrounded Test Result																				
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Carbon dioxide	0																				
Carbon-Related Exhaust Emissions	0																				
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Drive Trace Inertia Work Ratio Rating	1.353																				
Integrated DC KW-HRS	1.7201																				
Manufacturer Fuel Economy	23.1316																				
Charge Depleting Bag/Phase #4																					
	<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>216.951</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>99.99</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>99.99</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>99.99</td></tr><tr><td>Integrated DC KW-HRS</td><td>61.9287</td></tr><tr><td>Manufacturer Fuel Economy</td><td>28.5451</td></tr></table>			Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	216.951	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	99.99	Drive Trace Energy Economy Rating	99.99	Drive Trace Inertia Work Ratio Rating	99.99	Integrated DC KW-HRS	61.9287	Manufacturer Fuel Economy	28.5451
Test Result/Emission Name	Unrounded Test Result																				
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Carbon dioxide	0																				
Carbon-Related Exhaust Emissions	0																				
Drive Trace Absolute Speed Change Rating	99.99																				
Drive Trace Energy Economy Rating	99.99																				
Drive Trace Inertia Work Ratio Rating	99.99																				
Integrated DC KW-HRS	61.9287																				
Manufacturer Fuel Economy	28.5451																				
Charge Depleting Bag/Phase #5																					

Certification Summary Information Report

Test Group	VBMXV00.0G6C	Evaporative/Refueling Family	--																		
	<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>7.441</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>1.091</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>0.185</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>1.73</td></tr><tr><td>Integrated DC KW-HRS</td><td>1.637</td></tr><tr><td>Manufacturer Fuel Economy</td><td>21.9986</td></tr></table>			Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	7.441	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	1.091	Drive Trace Energy Economy Rating	0.185	Drive Trace Inertia Work Ratio Rating	1.73	Integrated DC KW-HRS	1.637	Manufacturer Fuel Economy	21.9986
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Integrated DC KW-HRS	1.637																				
Manufacturer Fuel Economy	21.9986																				
Charge Depleting Bag/Phase #6																					
	<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>10.246</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>3.103</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.211</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>3.889</td></tr><tr><td>Integrated DC KW-HRS</td><td>2.3492</td></tr><tr><td>Manufacturer Fuel Economy</td><td>22.9285</td></tr></table>			Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	10.246	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	3.103	Drive Trace Energy Economy Rating	-0.211	Drive Trace Inertia Work Ratio Rating	3.889	Integrated DC KW-HRS	2.3492	Manufacturer Fuel Economy	22.9285
Test Result/Emission Name	Unrounded Test Result																				
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	<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>7.436</td></tr><tr><td>Carbon dioxide</td><td>0</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>0.686</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.119</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>1.112</td></tr><tr><td>Integrated DC KW-HRS</td><td>1.665</td></tr><tr><td>Manufacturer Fuel Economy</td><td>22.391</td></tr></table>			Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	7.436	Carbon dioxide	0	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	0.686	Drive Trace Energy Economy Rating	-0.119	Drive Trace Inertia Work Ratio Rating	1.112	Integrated DC KW-HRS	1.665	Manufacturer Fuel Economy	22.391
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Integrated DC KW-HRS	1.665																				
Manufacturer Fuel Economy	22.391																				
Charge Depleting Bag/Phase #8																					

Certification Summary Information Report

Test Group	VBMXV00.0G6C			Evaporative/Refueling Family			--						
	Test Result/Emission Name				Unrounded Test Result								
	Actual Distance Driven (miles)				38.798								
	Carbon dioxide				0								
	Carbon-Related Exhaust Emissions				0								
	Drive Trace Absolute Speed Change Rating				99.99								
	Drive Trace Energy Economy Rating				99.99								
	Drive Trace Inertia Work Ratio Rating				99.99								
	Integrated DC KW-HRS				11.1282								
	Manufacturer Fuel Economy				28.6824								
	Manufacturer Test Comments												
01_MCT_CU56890_03_FEDV_i5 M60 xDrive Sedan (21" Wheels)_A_ETW-5500_RG44_default mode_D; MCT UBE energy = 84648 Wh													
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	0	--	--	--	--	--	1	0	--	--
Fed	120,000 miles	Other	CREE	0	--	--	--	--	--	1	0	--	--
Fed	120,000 miles	Other	CREE	0	--	--	--	--	--	1	0	--	--
Fed	120,000 miles	Other	CREE	0	--	--	--	--	--	1	0	--	--
Fed	120,000 miles	Other	CREE	0	--	--	--	--	--	1	0	--	--
Fed	120,000 miles	Other	CREE	0	--	--	--	--	--	1	0	--	--
Fed	120,000 miles	Other	CREE	0	--	--	--	--	--	1	0	--	--
Fed	120,000 miles	Other	CREE	0	--	--	--	--	--	1	0	--	--
Fuel Properties													

Certification Summary Information Report

Test Group		VBMXV00.0G6C			Evaporative/Refueling Family		--			
Consolidated List of Standards										
Exhaust Standards										
Cert Region		Federal			Cert/In-Use Code		Cert			
Vehicle Class		LDV/Passenger Car			Standard Level		Other			
Fuel		Electricity			Test Procedure		Multi-Cycle Test (MCT)			
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	--	--	--	--	--	1	--	0
150,000 miles		CO	--	--	--	--	--	1	--	0

Certification Summary Information Report

Test Group		VBMXV00.0G6C	Evaporative/Refueling Family		--
Glossary					
Useful Life					
4	4,000 miles		120	120,000 miles	
50	50,000 miles		150	150,000 miles	
100	100,000 miles				
Emission Name					
HC-TOTAL	Total Hydrocarbon		COMB-CREE	Combined Carbon-Related Exhaust Emissions	
CO	Carbon Monoxide		COMB-OPT-CREE	Combined Optional Carbon-Related Exhaust Emissions	
CO2	Carbon dioxide		HC-TOTAL-EQUIV	Total Hydrocarbon equivalent - Evap only	
CREE	Carbon-Related Exhaust Emissions		METHANE-COMB	Combined CH4 for HD 2b/3 vehicles only	
OPT-CREE	Optional Carbon-Related Exhaust Emissions		N2O-COMB	Combined Nitrous Oxide for HD 2b/3 vehicles only	
NOX	Nitrogen Oxide		LEAK-DIA	Effective Leak Diameter (inches)	
PM	Particulate Matter		LEAK-GAS CAP	Gas Cap Leakage (cc/min)	
PM-COMP	SFTP Composite Particulate Matter		CO2-COMB	Combined Carbon Dioxide for HD 2b/3 Vehicles Only	
HC-NM	Non-methane Hydrocarbon		KW-HRS	Integrated DC KW-HRS	
OMHCE	Organic material Hydrocarbon Equivalent		CH4 BAG 1	Bag 1 Methane	
OMNMHCE	Organic material non-methane HC equivalent		CH4 BAG 2	Bag 2 Methane	
NMOG	Non-methane organic gases		CH4 BAG 3	Bag 3 Methane	
HCHO	Formaldehyde		CH4 BAG 4	Bag 4 Methane	
H3C2HO	Acetaldehyde		CO BAG 1	Bag 1 Carbon Monoxide	
HC-NM+NOX	SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03		CO BAG 2	Bag 2 Carbon Monoxide	
HC-NM+NOX-COMP	SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides		CO BAG 3	Bag 3 Carbon Monoxide	
CO-COMP	SFTP Composite Carbon Monoxide		CO BAG 4	Bag 4 Carbon Monoxide	
ETHANOL	C2H5OH - Ethanol		NMOG BAG 1	Bag 1 Non-methane organic gases	
FE BAG 1	Bag 1 Fuel Economy		NMOG BAG 2	Bag 2 Non-methane organic gases	
FE BAG 2	Bag 2 Fuel Economy		NMOG BAG 3	Bag 3 Non-methane organic gases	
FE BAG 3	Bag 3 Fuel Economy		NMOG BAG 4	Bag 4 Non-methane organic gases	
FE BAG 4	Bag 4 Fuel Economy		ACT-DISTANCE BAG 1	Bag 1 Actual Distance	
MFR FE	Manufacturer Fuel Economy		ACT-DISTANCE BAG 2	Bag 2 Actual Distance	
HC	Hydrocarbon for Running Loss and ORVR		ACT-DISTANCE BAG 3	Bag 3 Actual Distance	
METHANE	CH4 - Methane		ACT-DISTANCE BAG 4	Bag 4 Actual Distance	
METHANOL	CH3OH - Methanol		HC-TOTAL BAG 1	Bag 1 Total Hydrocarbon	
N2O	Nitrous Oxide		HC-TOTAL BAG 2	Bag 2 Total Hydrocarbon	
SPITBACK	Spitback Hydrocarbon in grams		HC-TOTAL BAG 3	Bag 3 Total Hydrocarbon	
AMP-HRS	Integrated Amp-hours		HC-TOTAL BAG 4	Bag 4 Total Hydrocarbon	
START-SOC	System Start State of Charge Watt-hours		WATT-HRS BAG 1	Bag 1 Watt Hours	
END-SOC	System End State of Charge Watt-hours		WATT-HRS BAG 2	Bag 2 Watt Hours	

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ACT-DISTANCE	Actual Distance Driven (miles)		WATT-HRS BAG 3	Bag 3 Watt Hours	
AS-VOLT	Average System Voltage		WATT-HRS BAG 4	Bag 4 Watt Hours	
CO2 BAG 1	Bag 1 Carbon Dioxide		WATT-HRS	Watt Hours	
CO2 BAG 2	Bag 2 Carbon Dioxide		HC-NM BAG 1	Bag 1 Non-methane Hydrocarbon	
CO2 BAG 3	Bag 3 Carbon Dioxide		HC-NM BAG 2	Bag 2 Non-methane Hydrocarbon	
CO2 BAG 4	Bag 4 Carbon Dioxide		HC-NM BAG 3	Bag 3 Non-methane Hydrocarbon	
NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides		HC-NM BAG 4	Bag 4 Non-methane Hydrocarbon	
NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides		N2O BAG 1	Bag 1 Nitrous Oxide	
DT-IWRR	Drive Trace Inertia Work Ratio Rating		N2O BAG 2	Bag 2 Nitrous Oxide	
DT-ASCR	Drive Trace Absolute Speed Change Rating		N2O BAG 3	Bag 3 Nitrous Oxide	
DT-EER	Drive Trace Energy Economy Rating		N2O BAG 4	Bag 4 Nitrous Oxide	
Certification Region					
CA	California + CAA Section 177 states		FA	Federal	
Exhaust Emission Standard Level					
B1	Federal Tier 2 Bin 1		HDV2B340	Federal Tier 3 HD Class 2b Transitional Bin 340	
B2	Federal Tier 2 Bin 2		HDV2B250	Federal Tier 3 HD Class 2b Bin 250	
B3	Federal Tier 2 Bin 3		HDV2B200	Federal Tier 3 HD Class 2b Bin 200	
B4	Federal Tier 2 Bin 4		HDV2B170	Federal Tier 3 HD Class 2b Bin 170	
B5	Federal Tier 2 Bin 5		HDV2B150	Federal Tier 3 HD Class 2b Bin 150	
B6	Federal Tier 2 Bin 6		HDV2B0	Federal Tier 3 HD Class 2b Bin 0	
B7	Federal Tier 2 Bin 7		HDV3B630	Federal Tier 3 HD Class 3 Transitional Bin 630	
B8	Federal Tier 2 Bin 8		HDV3B570	Federal Tier 3 HD Class 3 Transitional Bin 570	
B9	Federal Tier 2 Bin 9		HDV3B400	Federal Tier 3 HD Class 3 Bin 400	
B10	Federal Tier 2 Bin 10		HDV3B270	Federal Tier 3 HD Class 3 Bin 270	
B11	Federal Tier 2 Bin 11		HDV3B230	Federal Tier 3 HD Class 3 Bin 230	
HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)		HDV3B200	Federal Tier 3 HD Class 3 Bin 200	
HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)		HDV3B0	Federal Tier 3 HD Class 3 Bin 0	
L2	California LEV-II LEV		L4SULEV100	California LEV-IV SULEV100	
L2OP	California LEV-II LEV Optional		L4SULEV125	California LEV-IV SULEV125	
U2	California LEV-II ULEV		L4SULEV15	California LEV-IV SULEV15	
S2	California LEV-II SULEV		L4SULEV150	California LEV-IV SULEV150	
ZEV	California ZEV		L4SULEV170	California LEV-IV SULEV170	
OT	Other		L4SULEV175	California LEV-IV SULEV175	
T1	Federal Tier 1		L4SULEV20	California LEV-IV SULEV20	
PZEV	California PZEV		L4SULEV200	California LEV-IV SULEV200	
L2LEV160	California LEV-II LEV160		L4SULEV230	California LEV-IV SULEV230	
L2ULEV125	California LEV-II ULEV125		L4SULEV25	California LEV-IV SULEV25	
L2SULEV30	California LEV-II SULEV30		L4SULEV30	California LEV-IV SULEV30	
L2LEV395	California LEV-II LEV395		L4SULEV75	California LEV-IV SULEV75	

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L2ULEV340	California LEV-II ULEV340		L4SULEV85	California LEV-IV SULEV85	
L2LEV630	California LEV-II LEV630		L4ULEV125	California LEV-IV ULEV125	
L2ULEV570	California LEV-II ULEV570		L4ULEV200	California LEV-IV ULEV200	
L3LEV160	California LEV-III LEV160		L4ULEV250	California LEV-IV ULEV250	
L3ULEV125	California LEV-III ULEV125		L4ULEV270	California LEV-IV ULEV270	
L3ULEV70	California LEV-III ULEV70		L4ULEV40	California LEV-IV ULEV40	
L3ULEV50	California LEV-III ULEV50		L4ULEV400	California LEV-IV ULEV400	
L3SULEV30	California LEV-III SULEV30		L4ULEV50	California LEV-IV ULEV50	
L3SULEV20	California LEV-III SULEV20		L4ULEV60	California LEV-IV ULEV60	
L3LEV395	California LEV-III LEV395		L4ULEV70	California LEV-IV ULEV70	
L3ULEV340	California LEV-III ULEV340		T4B170	Federal Tier 4 MDV Bin 170	
L3ULEV250	California LEV-III ULEV250		T4B150	Federal Tier 4 MDV Bin 150	
L3ULEV200	California LEV-III ULEV200		T4B125	Federal Tier 4 MDV Bin 125	
L3SULEV170	California LEV-III SULEV170		T4B100	Federal Tier 4 MDV Bin 100	
L3SULEV150	California LEV-III SULEV150		T4B85	Federal Tier 4 MDV Bin 85	
L3LEV630	California LEV-III LEV630		T4B75	Federal Tier 4 MDV Bin 75	
L3ULEV570	California LEV-III ULEV570		T4B70	Federal Tier 4 Bin 70	
L3ULEV400	California LEV-III ULEV400		T4B65	Federal Tier 4 Bin 65	
L3ULEV270	California LEV-III ULEV270		T4B60	Federal Tier 4 Bin 60	
L3SULEV230	California LEV-III SULEV230		T4B55	Federal Tier 4 Bin 55	
L3SULEV200	California LEV-III SULEV200		T4B50	Federal Tier 4 Bin 50	
T3B160	Federal Tier 3 Bin 160		T4B45	Federal Tier 4 Bin 45	
T3B125	Federal Tier 3 Bin 125		T4B40	Federal Tier 4 Bin 40	
T3B110	Federal Tier 3 Transitional Bin 110		T4B35	Federal Tier 4 Bin 35	
T3B85	Federal Tier 3 Transitional Bin 85		T4B30	Federal Tier 4 Bin 30	
T3SULEV30	Federal Tier 3 Transitional LEV-II SULEV30 Carryover		T4B25	Federal Tier 4 Bin 25	
T3B70	Federal Tier 3 Bin 70		T4B20	Federal Tier 4 Bin 20	
T3B50	Federal Tier 3 Bin 50		T4B15	Federal Tier 4 Bin 15	
T3B30	Federal Tier 3 Bin 30		T4B10	Federal Tier 4 Bin 10	
T3B20	Federal Tier 3 Bin 20		T4B5	Federal Tier 4 Bin 5	
T3B0	Federal Tier 3 Bin 0		T4B0	Federal Tier 4 Bin 0	
HDV2B395	Federal Tier 3 HD Class 2b Transitional Bin 395				
Transmission Type Code					
AMS	Automated Manual- Selectable (e.g. Automated Manual with paddles)	M	Manual		
A	Automatic	OT	Other		
AM	Automated Manual	SA	Semi-Automatic		
CVT	Continuously Variable	SCV	Selectable Continuously Variable (e.g. CVT with paddles)		
Drive System Code					
4	4-Wheel Drive	P	Part-time 4-Wheel Drive		

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F	2-Wheel Drive, Front			A	All Wheel Drive		
R	2-Wheel Drive, Rear						
Additional Terms and Acronyms							
AFC	Alternative Fuel Converter			ICI	Independent Commercial Importer		
CSI	Certificate Summary Information			ORVR	Onboard Refueling Vapor Recovery		
DF	Deterioration Factor			SIL	Shift Indicator Light		
Evap	Evaporation, Evaporative			Trans	Transmission		