

STATE OF CALIFORNIA
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
CALIFORNIA AIR RESOURCES BOARD
MOBILE SOURCE CERTIFICATION AND COMPLIANCE FEE PAYMENT FORM FOR ON-ROAD APPLICATIONS ONLY

CARB USE ONLY

Invoice Name	MSF231063
Invoice Date	Apr 12, 2024

COMPANY INFORMATION

Company Name	Ford Motor Company
Address	1 American Road
City	Dearborn
State	Michigan
Zip	48126-2798
Country	United States
Contact Name	Tina Oliver
Contact Telephone Number	313-3238938
Contact Email	toliver@ford.com
CARB Customer Number	CCAM000031

APPLICATION INFORMATION

Payment Row Number	Product Description or File Name	Model Year/Calendar Year	Unique Application Identifier: Test Group, Engine Family, Trailer Family, Vehicle Family, ZEP Family, if applicable (ID listed in payment row must match the unique identifier given to the certification application)	Category Type	Fee Type	Amount
1	OPCARRYOVER_25_CBI_SF	Model Year 2025	SFMXT01.52X1	Light-duty vehicle test group and medium-duty vehicle test group	Partial Carry-Over	\$ 23,255.00
2	OPCARRYOVER_25_CBI_SF	Model Year 2025	SFMXT02.52P1	Light-duty vehicle test group and medium-duty vehicle test group	Partial Carry-Over	\$ 23,255.00
3	OPCARRYOVER_25_CBI_SF	Model Year 2025	SFMXT02.02JB	Light-duty vehicle test group and medium-duty vehicle test group	Partial Carry-Over	\$ 23,255.00
4	OPCARRYOVER_25_CBI_SF	Model Year 2025	SFMXT02.52F1	Light-duty vehicle test group and medium-duty vehicle test group	Partial Carry-Over	\$ 23,255.00
5	OPCARRYOVER_25_CBI_SF	Model Year 2025	SFMXT02.53CE	Light-duty vehicle test group and medium-duty vehicle test group	Partial Carry-Over	\$ 23,255.00
6	OPCARRYOVER_25_CBI_SF	Model Year 2025	SFMXV05.0VKN	Light-duty vehicle test group and medium-duty vehicle test group	Partial Carry-Over	\$ 23,255.00
7	25_CBI_SFMXV00.0B4A_APP	Model Year 2025	SFMXV00.0B4A	Light-duty vehicle test group and medium-duty vehicle test group	Zero-Emission	\$ 11,627.00
8	25_CBI_SFMXV00.0B4R_APP	Model Year 2025	SFMXV00.0B4R	Light-duty vehicle test group and medium-duty vehicle test group	Zero-Emission	\$ 11,627.00
9	OPCARRYOVER_25_CBI_SF	Model Year 2025	SFMXT02.02JF	Light-duty vehicle test group and medium-duty vehicle test group	Partial Carry-Over	\$ 23,255.00

10	OPCARRYOVER_25_CBI_SF	Model Year 2025	SFMXV02.3VJY	Light-duty vehicle test group and medium-duty vehicle test group	Partial Carry-Over	\$ 23,255.00
11	25_CBI_SFMXT02.02Y3_APP	Model Year 2025	SFMXT02.02Y3	Light-duty vehicle test group and medium-duty vehicle test group	Base	\$ 46,509.00

Total Due \$ 255,803.00

I, NADE NITTE, attest that any information provided is true, accurate, and complete.
(Responsible Party Signature Here)

FORD MOTOR COMPANY

APPLICATION FOR CERTIFICATION - PART 1

2025 Model Year

Test Group: SFMXT02.02Y3
Durability Group: SFMXGPGNND4B
Evaporative Families: SFMXR0125GDF

Test Group Description: 2.0L GTPFDI
Federal LDT2, California LDT,
Includes 50-State Calibrations

Durability Group Description: Four Stroke, Otto Cycle, Gasoline Fueled,
Turbocharged, Port Fuel Injection, Direct Injection,
Catalyst Code D

Applicable Standards: Federal Exhaust = LDT2, Federal T3B30
Federal Evaporative = LDT2, T3e
California Exhaust = LDT, LEV3-SULEV30
California Evaporative = L3e
Cold NMHC FEL = 0.3 g/mi
SFTP NMOG+NOx Composite FEL = 0.050 g/mi
Particulate Matter = 0.003 g/mi

Carlines Covered: 1-25 = BRONCO SPORT 4WD
1-52 = MAVERICK AWD
1-53 = MAVERICK TREMOR AWD
1-54 = MAVERICK LOBO AWD

Vehicles Tested:

Exhaust Emissions Vehicle: SHD1-2.0-J-988 / Config 0		Evaporative Emissions Vehicles: SHD1-1.5-J-989 / Config 1 313W540 / Config 0 (BETP Only)	
FTP TN:	SFMX10087180	2Day TN:	SFMX10087244
HWY TN:	SFMX10087181	3Day TN:	SFMX10087231
US06 TN:	SFMX10087184	RL TN:	SFMX10087245
SC03 TN:	SFMX10087182	ORVR TN:	SFMX10087246
Cold CO TN:	SFMX10087183	LINKING TN:	SFMX10087229
		BETP TN:	LFMX10058649

Release Date: December 23rd, 2024

For Questions, Contact:
Tom Beierschmitt, (313) 407-7886 (tbeiers1@ford.com)

Application for Certification

Part 1



Part 1 Application Index

- § 00.00.00.00 Cover Page**
- § 02.00.00.00 Durability Group Description**
- § 03.00.00.00 Evaporative/ Refueling Family Description**
 - 03.00.01 Evap Family & Calibration Parameters
- § 04.00.00.00 Durability Procedure Description**
- § 05.00.00.00 Test Group Description**
- § 06.00.00.00 Test Vehicle Description**
- § 07.00.00.00 Test Results**
 - 07.00.01.00 EPA Certification Summary Information (CSI) report(s)
- § 08.00.00.00 Emission Testing Waiver Statements**
 - 08.00.01.00 Statements of compliance
- § 09.00.00.00 OBDII System Description**
- § 11.00.00.00 AECD Descriptions**
- § 12.00.00.00 Description of Vehicles Covered by Certificate and Test Parameters**
 - 12.00.01.00 Common Family Parameters
 - 12.00.02.00 Calibration Description
 - 12.00.03.00 Calibration Parts List
 - 12.00.05.00 Test Vehicle Requirements
 - 12.00.06.00 Vehicle Description Reports
- § 14.00.00.00 Request for Certification**
 - EPA Cover Letter
 - CARB Cover Letter
- § 15.00.00.00 Other Information**
 - 15.00.01.00 Fee Filing Form
- § 16.00.00.00 Confidential Information**
 - 16.00.01.00 Family Catalyst Information
 - 16.00.03.00 OBD II Deficiency Summary
 - 16.00.04.00 DF Summary
 - 16.00.05.00 PowerTrain Control Module (PCM) - Parameters
- § 17.00.00.00 California ARB Information**
 - 17.00.01.00 VECI Label
- § 18.00.00.00 Revisions**

Part 2 Application Index **(Running change updates)**



SECTION 2

Durability Group Description

For a description of the Durability Group for this test group refer to Section 16.00.00.00 of the Common Section.



SECTION 3

Evaporative/Refueling Family Description

03.00.00.00

03.00.01.00 Evaporative Family and Calibration Parameters

Evaporative Family Name: SFMXR0125GDF

2025 MY 2.0L GTPFDI Bronco Sport

<u>Emission Component</u>	<u>Sensed Parameter</u>	<u>Controlled Parameter</u>	<u>Justification</u>	<u>Calibration Specification</u>
Capless Refueling Component Insert LU5A-9D000-CC	None	Fuel Tank Vapor	Operates in EVAP and/or ORVR	
Vapor Hose with ORVR Recirculation Orifice LX61-9D333-ND	None	Vapor Recirculation	Operates in ORVR	Orifice Diameter: 3.0 mm
Fuel Limiting Vent Valve (FLVV) LX61-9B190-AA	Fuel Tank Vapor	Fuel Tank Vapor	Operates in EVAP and/or ORVR	FLVV Orifice: 10.23 mm
Grade Vent Valve LX61-9B593-RA	Fuel Tank Vapor	Fuel Tank Vapor	Operates in EVAP	GVV Orifice: 2.00 mm Bleed Notch: 0.5 mm
Fuel Tank Pressure Sensor 9U5A-9C052-BC	Fuel Tank Pressure	None	Operates in FTP	
Carbon Canister HU5A-9D653-FD	None	Fuel Vapor	Operates in EVAP and/or ORVR	125g BWC 2.2L Total Volume
Canister Purge Valve EU5A-9G866-CE	Signal from PCM	Vacuum to canister	Operates in FTP	100 SLPM
AIS Hydrocarbon Trap GN15-9T303-AA	None	Fuel Vapor	Operates in EVAP	

03.00.02.00 Evaporative Family and Calibration Parameters

Evaporative Family Name: SFMXR0125GDF

2025 MY 2.0L GTPFDI Maverick

<u>Emission Component</u>	<u>Sensed Parameter</u>	<u>Controlled Parameter</u>	<u>Justification</u>	<u>Calibration Specification</u>
Capless Refueling Component Insert MU5A-9D000-AB MU5A-9D000-AC (Alt.)	None	Fuel Tank Vapor	Operates in EVAP and/or ORVR	
Vapor Hose with ORVR Recirculation Orifice NZ61-9D333-BE	None	Vapor Recirculation	Operates in ORVR	Orifice Diameter: 2.75 mm
Combo Fuel Limiting Vent Valve & Grade Vent Valve NZ61-9B190-AC	Fuel Tank Vapor	Fuel Tank Vapor	Operates in EVAP and/or ORVR	FLVV Orifice Diameter: 11.8 mm GVV Orifice Diameter: 2.54 mm
Fuel Tank Pressure Sensor 9U5A-9C052-BC	Fuel Tank Pressure	None	Operates in FTP	
Carbon Canister HU5A-9D653-FD	None	Fuel Vapor	Operates in EVAP and/or ORVR	125g BWC 2.2L Total Volume
Canister Purge Valve LU5A-9G866-EA	Signal from PCM	Vacuum to canister	Operates in FTP	95 SLPM
AIS Hydrocarbon Trap GN15-9T303-AA	None	Fuel Vapor	Operates in EVAP	



SECTION 4

Durability Procedure Description

For a description of the Durability Procedure,
refer to Section 16.00.00.00 of the Common Section.



SECTION 5

Test Group Description

For a description of this Test Group, refer to the Cover Page (00.00.00.00) and to the Test Results Section (07.00.00.00) of this application.



SECTION 6

Test Vehicle Description

For a description of the Test Vehicles utilized in this Test Group,
refer to Section 07.00.00.00 of this application.



SECTION 7

EPA Certification Summary Information Report (Test Results)

Certification Summary Information Report

Manufacturer	Ford Motor Company	Manufacturer Code	FMX
Test Group	SFMXT02.02Y3	Evaporative/Refueling Family	SFMXR0125GDF
Certificate Number	--	CARB Executive Order #	--
Certificate Issue Date	--	Certificate Revision Date	--
Certificate Effective Date	--	Conditional Certificate	--
CSI Revision #	--	CSI Submission/Revision Date	08/27/2024 03:53:05 PM
Model Year	2025		

Test Group Information

CSI Type	Update for Correction	Running Change Reference Number	--
GHG Exempt Status	Not Exempt		

Drive Sources and Fuel(s)

Drive Source #1: Combustion Engine

Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator
Gasoline	Spark Ignition direct & ported injection	No

Hybrid Indicator	No		
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	--
Multiple Fuel Combustion	--	Off-board Charge Capable Indicator	--
Fuel Cell Indicator	--	EPA Vehicle Class	LDT2
Federal Clean Fuel Vehicle	No	Federal Clean Fuel Vehicle Standard	--
Federal Clean Fuel Vehicle ILEV	No	California Partial Zero Emissions Vehicle Indicator	No
Durability Group Name	SFMXGPGNND4B	Durability Group Equivalency Factor	1.8
Reduced Fee Test Group	No	Certification Region Code(s)	FA, CA
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	Tier 3	SFTP Tier 2 Composite CO Option	No
SFTP LEV-III Composite Compliance Indicator	Yes		
OBD Compliance Type	CARB	OBD Demonstration Vehicle Test Group	SFMXT02.34K2
Test Group OBD Compliance Level	Partial - with deficiencies	Number of Test Group OBD Deficiencies	1
OBD Deficiencies Comments	OBD Deficiencies: Catalyst Reheating Strategy Monitoring		
Mfr Test Group Comments	2025MY 2.0L GTPFDI Ford Bronco Sport - E10 City Litmus Value = 18.7 MPG, City Litmus Threshold = 18.0 MPG, E10 HWY Litmus Value = 24.4 MPG, HWY Litmus Threshold = 23.6 MPG, T3B30, SULEV30, SFTP: 0.050 g/mi		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group	SFMXT02.02Y3	Evaporative/Refueling Family	SFMXR0125GDF
Evaporative/Refueling Family Information			
Evaporative Summary Information Type	Update for Correction	Submission/Correction Date	08/22/2024 04:27:16 PM
Integrated ORVR?	Yes	Fuel(s)	Gasoline
Multiple Fuel Storage	--		
Bladder Fuel Tank?	No		
Fuel Tank Material	Plastic	Fuel Tank Material Description	Plastic
Fill Pipe Seal Type	Liquid seal		
Air Intake System Vapor Storage Device?	Yes	Air Intake System Vapor Storage Device Description	Carbon HC trap in air induction system
Fuel System Vapor Storage Canister?	Yes	Other Vapor Storage	1 X 2.1L 3-port Rect.
Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)	125	Number of Primary Canisters	1
Number of Bleed Canisters	1	Bleed Canister Total Working Capacity (grams)	1
Mfr Evaporative/Refueling Family Comments	Bronco Sport 1.5L GTPFDI, Escape 1.5L GTPFDI, Escape 2.0L GTPFDI, Bronco Sport 2.0L GTPFDI, Corsair 2.0L GTPFDI, Maverick 2.0L GTPFDI, Maverick Tremor 2.0L GTPFDI, Maverick Lobo 2.0L GTPFDI		
Leak Family Details			
Leak Family Indicator	Yes		
Canister Bleed Test Indicator	Yes	Applicability of Evaporative Canister Bleed Test	50 State
Evaporative Canister Bleed Test Comments	BETP		
CARB Fuel Only (Rig) Test Indicator	No	Applicability of CARB Fuel Only (Rig) Test	--
CARB Fuel Only (Rig) Test Comments	--		
Leak Family Name	Applicability of Leak Family Requirements	Leak Family Standard (inches)	Leak Family Description
SFMXR0125GDF-001	50 State	0.02	--

Certification Summary Information Report

Test Group	SFMXT02.02Y3	Evaporative/Refueling Family	SFMXR0125GDF
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Models Covered by this Certificate

Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - Type	- # of Gears	Trans - Lockup
Ford Motor Company	1 - Ford	55 - MAVERICK LOBO AWD	Federal	4-Wheel Drive	Semi-Automatic	8	Yes
Ford Motor Company	1 - Ford	53 - MAVERICK TREMOR AWD	California + CAA Section 177 states	4-Wheel Drive	Semi-Automatic	8	Yes
Ford Motor Company	1 - Ford	55 - MAVERICK LOBO AWD	California + CAA Section 177 states	4-Wheel Drive	Semi-Automatic	8	Yes
Ford Motor Company	1 - Ford	25 - BRONCO SPORT 4WD	Federal	4-Wheel Drive	Semi-Automatic	8	Yes
Ford Motor Company	1 - Ford	52 - MAVERICK AWD	California + CAA Section 177 states	Part-time 4-Wheel Drive	Automatic	8	Yes
Ford Motor Company	1 - Ford	53 - MAVERICK TREMOR AWD	Federal	4-Wheel Drive	Semi-Automatic	8	Yes
Ford Motor Company	1 - Ford	25 - BRONCO SPORT 4WD	California + CAA Section 177 states	4-Wheel Drive	Semi-Automatic	8	Yes
Ford Motor Company	1 - Ford	52 - MAVERICK AWD	Federal	Part-time 4-Wheel Drive	Automatic	8	Yes

Engine Description

Hybrid Type	--	Hybrid Description	--
Engine Type	4-Stroke Spark Ignition	Mfr Engine Description	--
Engine Block Arrangement	Inline	Mfr Engine Block Arrangement Description	Inline-4
Camless Valvetrain Indicator	No	Oil Viscosity/Classification	SAE 5W-30 / ILSAC GF-6
Number of Cylinders/Rotors	4	Mechanically Variable Compression Ratio Indicator	N

After Treatment Device(s) (ATD)

ATD Number	ATD Type	ATD Precious Metal	Substrate Material	Substrate Construction
1	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
2	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith

Mfr After Treatment Device (ATD) Comments	TWC
Direct Ozone Reduction (DOR) Device	Not Equipped
Mfr Emission Control Device Comments	--

Certification Summary Information Report

Test Group	SFMXT02.02Y3	Evaporative/Refueling Family	SFMXR0125GDF								
Engine Configuration Number 1											
Engine Displacement (liters)	2.0	Engine Rated Horsepower	250								
Number of Inlet Valves Per Cylinder	2	Number of Exhaust Valves Per Cylinder	2								
Air Aspiration Method	Turbocharged	Number of Air Aspiration Devices	1								
Air Aspiration Device Configuration	Single	Charge Air Cooler Type	Air								
Air Aspiration Drive Method(s)	Mechanical										
Cylinder Deactivation	No										
Cylinder Deactivation Description	--										
Variable Valve Timing	Yes										
Variable Valve Timing System Description	Intake/Exhaust, Hydraulic Actuated VCT										
Variable Valve Lift?	No										
Variable Valve Lift System Description	--										
Number of Knock Sensors	2	Number of Air/Fuel Sensors	2								
Air/Fuel Sensor # 1 Type	Heated oxygen	Air/Fuel Sensor # 1 Description	HO2S								
Air/Fuel Sensor # 2 Type	Heated air fuel	Air/Fuel Sensor # 2 Description	WR-HO2S								
Mfr Air/Fuel Sensor Comments	--										
Exhaust Gas Recirculation	Yes	Cooled Exhaust Gas Recirculation	Yes								
EGR Type	Electronic/Electric	Exhaust Gas Recirculation Description if 'Other'	--								
Closed Loop Air Injection System	No										
Air Injection Type	Not Applicable	Air Injection Type if 'Other'	--								
Mfr Engine Configuration Comments	25MY 2.0L GTPFDI Bronco Sport 4WD, Maverick AWD, Maverick Tremor AWD, Maverick Lobo AWD. Rated HP and Peak Torque values based on 98 RON testing.										
Official Test Numbers											
Test Group	Fuel	FTP	US06	SC03	Cold CO	Highway	EPA City Litmus Value	EPA City Litmus Threshold	EPA Highway Litmus Value	EPA Highway Litmus Threshold	CREE Weighting Factor
Gasoline	SFMX10087180	SFMX10087184	SFMX10087182	SFMX10087183	SFMX10087181	22.4	228.2	32.1	286.1	1.0	
SFTP LEV-III Official Test Numbers											
Test Group Fuel	FTP	US06	SC03								
Gasoline	SFMX10087180	SFMX10087184	SFMX10087182								

Certification Summary Information Report

Test Group	SFMXT02.02Y3	Evaporative/Refueling Family	SFMXR0125GDF
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Emission Data Vehicle Information			
Vehicle ID / Configuration	313W540 / 0	Manufacturer Vehicle Configuration Number	1
Original Test Group Name	LFMXT01.52X1	Original Evaporative/Refueling Family	LFMXR0125GDF
Original Test Vehicle Model Year	2020		
Vehicle Model			
Represented Test Vehicle Make	Ford	Represented Test Vehicle Model	Escape

Leak Family Details			
Leak Family Identifier	001	Leak Family Name	LFMXR0125GDF-001

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>Combustion Engine</td><td>Gasoline</td></tr> </table>	Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	Gasoline		
Drive Source and Fuel#	Drive Source	Fuel							
1	Combustion Engine	Gasoline							

Hybrid Indicator	No		
Multiple Fuel Storage	--	Multiple Fuel Combustion	--
Fuel Cell Indicator	--	Rechargeable Energy Storage System Indicator	--
Rechargeable Energy Storage System	--	Rechargeable Energy Storage System, if 'Other'	--
Off-board charge Capable Indicator	--		
Odometer Correction -- Initial	0	Odometer Correction Factor	1.03
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles		
Odometer Correction Units	Miles		
Engine Code	LCTCY1NB06	Rated Horsepower	180
Displacement (liters)	1.5		
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	2-Wheel Drive, Front
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)
Curb Weight (lbs)	3464	Equivalent Test Weight (pounds)	3750
GVWR (lbs)	4760	N/V Ratio	28.6
Axle Ratio	3.81		
Transmission Type	Semi-Automatic	# of Transmission Gears	8
Transmission Lockup	Yes	Creep Gear	No

Certification Summary Information Report

Test Group	SFMXT02.02Y3	Evaporative/Refueling Family	SFMXR0125GDF
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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	30.78	-0.0241	0.02591	13.81	-0.3184	0.02722	12.6
Cold CO	30.78	-0.0241	0.02591	13.81	-0.3184	0.02722	N/A
US06	31.4	0.1163	0.02944	13.41	0.01323	0.02907	N/A

Emission Control Device Comments T3B30/SULEV30, Cold Bin 3, PM3, SFTP 0.070

Manufacturer Test Vehicle Comments Ford Escape

Test #	LFMX10058649	Test Procedure	65 - Evap Canister Bleed Test
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/15/2019	Fuel	Gasoline
Fuel Batch ID	--	Fuel Calibration Number	--
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	APTL		
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)		
Test Start Odometer Reading	9999	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value
OMHCE (Organic material Hydrocarbon Equivalent)	0.0038	--
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0038	--

Manufacturer Test Comments --

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	0.0038	0	0.004	0.020	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	OMHCE	0.0038	0	0.004	0.020	Pass

Certification Summary Information Report

Test Group	SFMXT02.02Y3	Evaporative/Refueling Family	SFMXR0125GDF						
Emission Data Vehicle Information									
Vehicle ID / Configuration	SHD1-1.5-J-989 / 1	Manufacturer Vehicle Configuration Number	1						
Original Test Group Name	SFMXT01.52X2	Original Evaporative/Refueling Family	SFMXR0125GDF						
Original Test Vehicle Model Year	2025								
Vehicle Model									
Represented Test Vehicle Make	Ford	Represented Test Vehicle Model	BRONCO SPORT SASQUATCH						
Leak Family Details									
Leak Family Identifier	001	Leak Family Name	SFMXR0125GDF-001						
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>Combustion Engine</td><td>Gasoline</td></tr> </table>	Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	Gasoline		
Drive Source and Fuel#	Drive Source	Fuel							
1	Combustion Engine	Gasoline							
Hybrid Indicator	No								
Multiple Fuel Storage	--	Multiple Fuel Combustion	--						
Fuel Cell Indicator	No	Rechargeable Energy Storage System Indicator	No						
Rechargeable Energy Storage System	--	Rechargeable Energy Storage System, if 'Other'	--						
Off-board charge Capable Indicator	--								
Odometer Correction -- Initial	0	Odometer Correction Factor	1.03						
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles								
Odometer Correction Units	Miles								
Engine Code	SCHDCRNA0002	Rated Horsepower	1						
Displacement (liters)	1.5								
Air Aspiration Method	Turbocharged	Air Aspiration Method, if 'Other'							
Number of Air Aspiration Devices	1	Air Aspiration Device Configuration	Single						
Charge Air Cooler Type	N/A	Drive Mode While Testing	2-Wheel Drive, Front						
Shift Indicator Light Usage	Not equipped	Aged Emission Components	150,000 (mi)						
Curb Weight (lbs)	3733	Equivalent Test Weight (pounds)	4000						
GVWR (lbs)	4810	N/V Ratio	28.1						
Axle Ratio	3.8								
Transmission Type	Automatic	# of Transmission Gears	8						
Transmission Lockup	Yes	Creep Gear	No						

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Certification Summary Information Report

Test Group	SFMXT02.02Y3	Evaporative/Refueling Family	SFMXR0125GDF
Test #	SFMX10087229	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	07/03/2024	Fuel	N/A
Fuel Batch ID	373-B	Fuel Calibration Number	89
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	APTL		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	7363	Odometer Units	K
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	297.592622	--
FE BAG 1 (Bag 1 Fuel Economy)	29.154613	29.154613
CO2 BAG 2 (Bag 2 Carbon Dioxide)	289.470696	--
FE BAG 2 (Bag 2 Fuel Economy)	30.239895	30.239895
CO2 BAG 3 (Bag 3 Carbon Dioxide)	276.59201	--
FE BAG 3 (Bag 3 Fuel Economy)	31.548069	31.548069
METHANE (CH4 - Methane)	0.003214	--
CO (Carbon Monoxide)	0.304003	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.992567	--
DT-EER (Drive Trace Energy Economy Rating)	0.466233	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	1.43692	--
HCHO (Formaldehyde)	0.0001	--
MFR FE (Manufacturer Fuel Economy)	29.7	29.7
NOX (Nitrogen Oxide)	0.006688	--
N2O (Nitrous Oxide)	0.001259	--
HC-NM (Non-methane Hydrocarbon)	0.0087227	--
NMOG (Non-methane organic gases)	0.009595	--
PM (Particulate Matter)	0.000617	--
HC-TOTAL (Total Hydrocarbon)	0.01181	--

Test Group		SFMXT02.02Y3		Evaporative/Refueling Family		SFMXR0125GDF		
		Test Result Name		Unrounded Test Result		Verify Calculated CREE/OPT-CREE		
		Carbon-Related Exhaust Emissions		294		999		
		Optional Carbon-Related Exhaust Emissions		294		999		
		Test Result Name		Unrounded Test Result		Verify Calculated CO2		
		Carbon dioxide		287.618253		--		
Manufacturer Test Comments		--						
Test #		SFMX10087231		Test Procedure		34 - Federal fuel 3-day evap		
Exhaust Test # for this Evap Test		SFMX10087229		Test Fuel Type		48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)		
Test Date		07/16/2024		Fuel		Gasoline		
Fuel Batch ID		--		Fuel Calibration Number		--		
Vehicle Class		N/A		DF Type		Mfr. Determined		
Verify Test Lab ID		APTL						
E10 Evaporative Test Measurement Method		Actual Total Hydrocarbon Equivalent Measurement (with speciation)						
Test Start Odometer Reading		7410		Odometer Units		K		
4WD Test Dyno		No		Diesel Adjustment Factor Usage		--		
State of Charge Delta		--						
Drive Cycle Speed Tolerance Criteria		Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)		Road Speed Fan Usage		No		
Test Results								
		Test Result Name		Unrounded Test Result		Verify Calculated FE Equivalent Value (miles per gallon)		
		OMHCE (Organic material Hydrocarbon Equivalent)		0.2929		--		
		HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)		0.2929		--		
Manufacturer Test Comments		--						
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	0.2929	0.0000	0.293	0.400	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	OMHCE	0.2929	0.0000	0.293	0.400	Pass

Test Group	SFMXT02.02Y3	Evaporative/Refueling Family	SFMXR0125GDF
Test #	SFMX10087244	Test Procedure	23 - 2-day evap
Exhaust Test # for this Evap Test	SFMX10087229	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	07/26/2024	Fuel	Gasoline
Fuel Batch ID	--	Fuel Calibration Number	--
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	APTL		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	7496	Odometer Units	K
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
OMHCE (Organic material Hydrocarbon Equivalent)	0.3523	--
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.3523	--

Manufacturer Test Comments2 Day EVAP Measured NMOG

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	0.3523	0.0000	0.352	0.400	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	OMHCE	0.3523	0.0000	0.352	0.400	Pass

Test Group	SFMXT02.02Y3	Evaporative/Refueling Family	SFMXR0125GDF
Test #	SFMX10087245	Test Procedure	32 - Federal Fuel Running Loss
Exhaust Test # for this Evap Test	SFMX10087229	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	07/16/2024	Fuel	Gasoline
Fuel Batch ID	--	Fuel Calibration Number	--
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	APTL		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	7410	Odometer Units	K
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
OMHCE (Organic material Hydrocarbon Equivalent)	0	--
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0	--

Manufacturer Test Comments --

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.000	0.002	0.00	0.05	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	OMHCE	0.000	0.002	0.00	0.05	Pass

Test Group	SFMXT02.02Y3	Evaporative/Refueling Family	SFMXR0125GDF									
Test #	SFMX10087246	Test Procedure	24 - Federal fuel refueling test (ORVR)									
Exhaust Test # for this Evap Test	SFMX10087229	Test Fuel Type	58 - Tier 3 E10 Regular Gasoline (10 RVP-FFV ORVR Only)									
Test Date	07/22/2024	Fuel	Gasoline									
Fuel Batch ID	--	Fuel Calibration Number	--									
Vehicle Class	N/A	DF Type	Mfr. Determined									
Verify Test Lab ID	APTL											
E10 Evaporative Test Measurement Method	Actual Total Hydrocarbon Equivalent Measurement (with speciation)											
Test Start Odometer Reading	7438	Odometer Units	K									
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--									
State of Charge Delta	--											
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	Road Speed Fan Usage	No									
Test Results												
<table><tr><td>Test Result Name</td><td>Unrounded Test Result</td><td>Verify Calculated FE Equivalent Value (miles per gallon)</td></tr><tr><td>OMHCE (Organic material Hydrocarbon Equivalent)</td><td>0.016</td><td>--</td></tr><tr><td>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</td><td>0.016</td><td>--</td></tr></table>				Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	OMHCE (Organic material Hydrocarbon Equivalent)	0.016	--	HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.016	--
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)										
OMHCE (Organic material Hydrocarbon Equivalent)	0.016	--										
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.016	--										
Manufacturer Test Comments												
ORVR test												
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	0.016	0.000	0.02	0.20	Pass				
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	OMHCE	0.016	0.000	0.02	0.20	Pass				

Certification Summary Information Report

Test Group	SFMXT02.02Y3	Evaporative/Refueling Family	SFMXR0125GDF						
Emission Data Vehicle Information									
Vehicle ID / Configuration	SHD1-2.0-J-988 / 0	Manufacturer Vehicle Configuration Number	0						
Original Test Group Name	SFMXT02.02Y3	Original Evaporative/Refueling Family	SFMXR0125GDF						
Original Test Vehicle Model Year	2025								
Vehicle Model									
Represented Test Vehicle Make	FORD	Represented Test Vehicle Model	BRONCO SPORT BADLANDS 4X4 4DR						
Leak Family Details									
Leak Family Identifier	001	Leak Family Name	SFMXR0125GDF-001						
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>Combustion Engine</td><td>Gasoline</td></tr> </table>	Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	Gasoline		
Drive Source and Fuel#	Drive Source	Fuel							
1	Combustion Engine	Gasoline							
Hybrid Indicator	No								
Multiple Fuel Storage	--	Multiple Fuel Combustion	--						
Fuel Cell Indicator	--	Rechargeable Energy Storage System Indicator	--						
Rechargeable Energy Storage System	--	Rechargeable Energy Storage System, if 'Other'	--						
Off-board charge Capable Indicator	--								
Odometer Correction -- Initial	0	Odometer Correction Factor	1.03						
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles								
Odometer Correction Units	Miles								
Engine Code	SCHDE3NA01	Rated Horsepower	250						
Displacement (liters)	2								
Air Aspiration Method	Turbocharged	Air Aspiration Method, if 'Other'							
Number of Air Aspiration Devices	1	Air Aspiration Device Configuration	Single						
Charge Air Cooler Type	Air	Drive Mode While Testing	2-Wheel Drive, Front						
Shift Indicator Light Usage	Not equipped	Aged Emission Components	150,000 (mi)						
Curb Weight (lbs)	3864	Equivalent Test Weight (pounds)	4250						
GVWR (lbs)	4890	N/V Ratio	28.6						
Axle Ratio	3.8								
Transmission Type	Automatic	# of Transmission Gears	8						
Transmission Lockup	Yes	Creep Gear	No						

Certification Summary Information Report

Test Group		SFMXT02.02Y3			Evaporative/Refueling Family		SFMXR0125GDF	
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	32.35	0.1914	0.02808	8.55	0.1061	0.02683	14.9	
Cold CO	32.35	0.1914	0.02808	8.55	0.1061	0.02683	N/A	
US06	32.35	0.1914	0.02808	8.55	0.1061	0.02683	N/A	
Emission Control Device Comments		T3B30/SULEV30 SFTP-0.050 PM3 CB3 T3e/L3e						
Manufacturer Test Vehicle Comments		Bronco Sport 2.0L GTPFDI (non-GPF)						

Certification Summary Information Report

Test Group	SFMXT02.02Y3	Evaporative/Refueling Family	SFMXR0125GDF
Test #	SFMX10087180	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	06/28/2024	Fuel	Gasoline
Fuel Batch ID	373-B	Fuel Calibration Number	89
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	DF Type	Mfr. Determined
Verify Test Lab ID	APTL		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4226	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	379.449841	--
FE BAG 1 (Bag 1 Fuel Economy)	22.951816	22.951816
CO2 BAG 2 (Bag 2 Carbon Dioxide)	380.25373	--
FE BAG 2 (Bag 2 Fuel Economy)	22.998719	22.998719
CO2 BAG 3 (Bag 3 Carbon Dioxide)	351.165874	--
FE BAG 3 (Bag 3 Fuel Economy)	24.88774	24.88774
METHANE (CH4 - Methane)	0.004688	--
CO (Carbon Monoxide)	0.354776	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.288847	--
DT-EER (Drive Trace Energy Economy Rating)	-0.424105	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.015624	--
HCHO (Formaldehyde)	0.000148	--
MFR FE (Manufacturer Fuel Economy)	23.4676	23.4676
NOX (Nitrogen Oxide)	0.007624	--
N2O (Nitrous Oxide)	0.000599	--
HC-NM (Non-methane Hydrocarbon)	0.0075	--
NMOG (Non-methane organic gases)	0.008216	--
PM (Particulate Matter)	0.000194	--
HC-TOTAL (Total Hydrocarbon)	0.011859	--

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Certification Summary Information Report

Test Group		SFMXT02.02Y3			Evaporative/Refueling Family					SFMXR0125GDF		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 30	CO	0.35	--	--	--	--	--	0.4	1.0	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CO-COMP	0.64	--	--	--	--	--	0.6	4.2	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	CREE	999	--	--	--	0	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 30	HCHO	0.0001	--	--	--	--	--	0.000	0.004	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	METHANE	0.0047	--	--	--	--	--	0.005	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	N2O	0.0006	--	--	--	--	--	0.001	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0082	--	1.1	--	--	--	0.008	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0158	--	--	--	--	--	0.016	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX-COMP	0.0287	--	--	--	--	--	0.029	0.050	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0076	--	--	--	--	--	0.008	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	OPT-CREE	999	--	--	--	0	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 30	PM	0.0002	--	--	--	--	--	0.000	0.003	Pass
CA	150,000 miles	California LEV-III SULEV30	CO	0.35	--	--	--	--	--	0.4	1.0	Pass
CA	150,000 miles	California LEV-III SULEV30	CO-COMP	0.64	--	--	--	--	--	0.6	4.2	Pass
CA	150,000 miles	California LEV-III SULEV30	HCHO	0.0001	--	--	--	--	--	0.000	0.004	Pass
CA	150,000 miles	California LEV-III SULEV30	METHANE	0.0047	--	--	--	--	--	0.005	0.030	Pass
CA	150,000 miles	California LEV-III SULEV30	N2O	0.0006	--	--	--	--	--	0.001	0.010	Pass
CA	150,000 miles	California LEV-III SULEV30	NMOG	0.0082	--	1.1	--	--	--	0.008	999.999	Pass
CA	150,000 miles	California LEV-III SULEV30	NMOG+NOX	0.0158	--	--	--	--	--	0.016	0.030	Pass
CA	150,000 miles	California LEV-III SULEV30	NMOG+NOX-COMP	0.0287	--	--	--	--	--	0.029	0.050	Pass
CA	150,000 miles	California LEV-III SULEV30	NOX	0.0076	--	--	--	--	--	0.008	999.999	Pass
CA	150,000 miles	California LEV-III SULEV30	PM	0.0002	--	--	--	--	--	0.000	0.003	Pass

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Certification Summary Information Report

Test Group	SFMXT02.02Y3	Evaporative/Refueling Family	SFMXR0125GDF
Test #	SFMX10087183	Test Procedure	11 - Cold CO
Exhaust Test # for this Evap Test	--	Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)
Test Date	07/12/2024	Fuel	Gasoline
Fuel Batch ID	375-B	Fuel Calibration Number	55
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	DF Type	Mfr. Determined
Verify Test Lab ID	APTL		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	123	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	476.745479	--
FE BAG 1 (Bag 1 Fuel Economy)	17.748653	17.748653
CO2 BAG 2 (Bag 2 Carbon Dioxide)	396.782919	--
FE BAG 2 (Bag 2 Fuel Economy)	21.770663	21.770663
CO2 BAG 3 (Bag 3 Carbon Dioxide)	390.274181	--
FE BAG 3 (Bag 3 Fuel Economy)	22.147414	22.147414
METHANE (CH4 - Methane)	0.014961	--
CO (Carbon Monoxide)	1.212847	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.211498	--
DT-EER (Drive Trace Energy Economy Rating)	-0.278745	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.161181	--
MFR FE (Manufacturer Fuel Economy)	20.8705	20.8705
NOX (Nitrogen Oxide)	0.015112	--
HC-NM (Non-methane Hydrocarbon)	0.0772	--
NMOG (Non-methane organic gases)	0.084935	--
HC-TOTAL (Total Hydrocarbon)	0.092323	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	411.536508	--

Manufacturer Test Comments

NMOG = 1.1 * NMHC

Certification Summary Information Report

Test Group		SFMXT02.02Y3			Evaporative/Refueling Family					SFMXR0125GDF		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	50,000 miles	Federal Tier 3 Bin 30	CO	1.21	--	--	--	--	--	1.2	12.5	Pass
Fed	120,000 miles	Federal Tier 3 Bin 30	HC-NM	0.08	--	--	--	--	--	0.1	0.3	Pass
CA	50,000 miles	California LEV-III SULEV30	CO	1.21	--	--	--	--	--	1.2	12.5	Pass

Certification Summary Information Report

Test Group	SFMXT02.02Y3	Evaporative/Refueling Family	SFMXR0125GDF
Test #	SFMX10087181	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	06/28/2024	Fuel	Gasoline
Fuel Batch ID	373-B	Fuel Calibration Number	89
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	DF Type	Mfr. Determined
Verify Test Lab ID	APTL		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4226	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.000609	--
CO (Carbon Monoxide)	0.05902	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.833942	--
DT-EER (Drive Trace Energy Economy Rating)	-0.309623	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.857656	--
MFR FE (Manufacturer Fuel Economy)	34.961268	34.961268
NOX (Nitrogen Oxide)	0.000964	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0.0002	--
NMOG (Non-methane organic gases)	0.000244	--
HC-TOTAL (Total Hydrocarbon)	0.000804	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	250.0973	999
Optional Carbon-Related Exhaust Emissions	250.1099	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	250.447239	--

Manufacturer Test Comments

NMOG = 1.03 * NMHC

Certification Summary Information Report

Test Group		SFMXT02.02Y3			Evaporative/Refueling Family					SFMXR0125GDF		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 30	CREE	999	--	--	--	0	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG	0.0002	--	1.03	--	--	--	0.000	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NMOG+NOX	0.0012	--	--	--	--	--	0.001	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	NOX	0.0010	--	--	--	--	--	0.001	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 30	OPT-CREE	999	--	--	--	0	--	999	--	--
CA	150,000 miles	California LEV-III SULEV30	NMOG	0.0002	--	1.03	--	--	--	0.000	999.999	Pass
CA	150,000 miles	California LEV-III SULEV30	NMOG+NOX	0.0012	--	--	--	--	--	0.001	0.030	Pass
CA	150,000 miles	California LEV-III SULEV30	NOX	0.0010	--	--	--	--	--	0.001	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	SFMXT02.02Y3	Evaporative/Refueling Family	SFMXR0125GDF
Test #	SFMX10087184	Test Procedure	90 - US06
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	06/28/2024	Fuel	Gasoline
Fuel Batch ID	373-B	Fuel Calibration Number	89
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	DF Type	Mfr. Determined
Verify Test Lab ID	APTL		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4258	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	579.950806	--
FE BAG 1 (Bag 1 Fuel Economy)	14.97802	14.97802
CO2 BAG 2 (Bag 2 Carbon Dioxide)	329.816672	--
FE BAG 2 (Bag 2 Fuel Economy)	26.382279	26.382279
METHANE (CH4 - Methane)	0.008377	--
CO (Carbon Monoxide)	1.159081	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.115047	--
DT-EER (Drive Trace Energy Economy Rating)	-0.805196	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.225926	--
MFR FE (Manufacturer Fuel Economy)	22.596893	22.596893
NOX (Nitrogen Oxide)	0.039034	--
HC-NM (Non-methane Hydrocarbon)	0.0316	--
NMOG (Non-methane organic gases)	0.032546	--
PM (Particulate Matter)	0.000184	--
HC-TOTAL (Total Hydrocarbon)	0.039408	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	385.257433	--

Manufacturer Test Comments

NMOG = 1.03 * NMHC

Certification Summary Information Report

Test Group		SFMXT02.02Y3			Evaporative/Refueling Family					SFMXR0125GDF		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 30	PM	0.0002	--	--	--	--	--	0.000	0.006	Pass
CA	150,000 miles	California LEV-III SULEV30	PM	0.0002	--	--	--	--	--	0.000	0.006	Pass

Test #	SFMX10087182	Test Procedure	95 - SC03
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	07/03/2024	Fuel	N/A
Fuel Batch ID	373-B	Fuel Calibration Number	89
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	APTL		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4274	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.007675	--
CO (Carbon Monoxide)	0.524316	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.872658	--
DT-EER (Drive Trace Energy Economy Rating)	-0.080131	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.843704	--
MFR FE (Manufacturer Fuel Economy)	17.776969	17.776969
NOX (Nitrogen Oxide)	0.003954	--
HC-NM (Non-methane Hydrocarbon)	0.0044	--
NMOG (Non-methane organic gases)	0.004503	--
HC-TOTAL (Total Hydrocarbon)	0.012586	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	491.185889	--

Manufacturer Test Comments NMOG = 1.03 * NMHC

Certification Summary Information Report

Test Group	SFMXT02.02Y3	Evaporative/Refueling Family	SFMXR0125GDF
Fuel Properties			
Fuel Batch ID	373-B	Fuel Calibration Number	89
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	06/28/2024
Fuel Batch Calibration Effective Date	06/28/2024	Fuel Batch Calibration Ineffective Date	12/31/2100
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.754
Fuel Ethanol Volume Percent (%)	9.4	Fuel Net Heating Value (BTU / lb)	17855
Fuel Blend Carbon Weight Fraction	0.829	Weight Fraction CO2	--
Fuel Batch ID	375-B	Fuel Calibration Number	55
Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)	Fuel Batch Calibration Date	07/10/2024
Fuel Batch Calibration Effective Date	07/10/2024	Fuel Batch Calibration Ineffective Date	12/31/2100
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.74
Fuel Ethanol Volume Percent (%)	9.8	Fuel Net Heating Value (BTU / lb)	17825
Fuel Blend Carbon Weight Fraction	0.825	Weight Fraction CO2	--

Certification Summary Information Report

Test Group		SFMXT02.02Y3			Evaporative/Refueling Family			SFMXR0125GDF		
Consolidated List of Standards										
Exhaust Standards										
Cert Region		Federal			Cert/In-Use Code			Both		
Vehicle Class		LDT2 (LVW 3751-5750, GVW 0-6000)			Standard Level			Federal Tier 3 Bin 30		
Fuel		Gasoline			Test Procedure			HWFE		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
150,000 miles	CREE	--	--	--	--	--	--	0	999.999	
150,000 miles	NMOG	--	--	1.03	--	--	--	--	999.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.030	
150,000 miles	NOX	--	--	--	--	--	--	--	999.999	
150,000 miles	OPT-CREE	--	--	--	--	--	--	0	999.999	
Cert Region		Federal			Cert/In-Use Code			Both		
Vehicle Class		LDT2 (LVW 3751-5750, GVW 0-6000)			Standard Level			Federal Tier 3 Bin 30		
Fuel		Gasoline			Test Procedure			Federal fuel 2-day exhaust (w/can load)		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
150,000 miles	CO	--	--	--	--	--	--	--	1.0	
150,000 miles	CO-COMP	--	--	--	--	--	--	--	4.2	
150,000 miles	CREE	--	--	--	--	--	--	0	999.999	
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004	
150,000 miles	METHANE	--	--	--	--	--	--	--	0.030	
150,000 miles	N2O	--	--	--	--	--	--	--	0.010	
150,000 miles	NMOG	--	--	1.1	--	--	--	--	999.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.030	
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	--	0.050	
150,000 miles	NOX	--	--	--	--	--	--	--	999.999	
150,000 miles	OPT-CREE	--	--	--	--	--	--	0	999.999	
150,000 miles	PM	--	--	--	--	--	--	--	0.003	

Certification Summary Information Report

Test Group		SFMXT02.02Y3			Evaporative/Refueling Family			SFMXR0125GDF	
Cert Region		Federal			Cert/In-Use Code			Both	
Vehicle Class		LDT2 (LVW 3751-5750, GVW 0-6000)			Standard Level			Federal Tier 3 Bin 30	
Fuel		Gasoline			Test Procedure			Cold CO	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
50,000 miles	CO	--	--	--	--	--	--	--	12.5
120,000 miles	HC-NM	--	--	--	--	--	--	--	0.3

Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Both	
Vehicle Class		LDT2 (LVW 3751-5750, GVW 0-6000)			Standard Level			California LEV-III SULEV30	
Fuel		Gasoline			Test Procedure			Federal fuel 2-day exhaust (w/can load)	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	--	1.0
150,000 miles	CO-COMP	--	--	--	--	--	--	--	4.2
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	METHANE	--	--	--	--	--	--	--	0.030
150,000 miles	N2O	--	--	--	--	--	--	--	0.010
150,000 miles	NMOG	--	--	1.1	--	--	--	--	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.030
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	--	0.050
150,000 miles	NOX	--	--	--	--	--	--	--	999.999
150,000 miles	PM	--	--	--	--	--	--	--	0.003

Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Both	
Vehicle Class		LDT2 (LVW 3751-5750, GVW 0-6000)			Standard Level			California LEV-III SULEV30	
Fuel		Gasoline			Test Procedure			HWFE	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	NMOG	--	--	1.03	--	--	--	--	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.030
150,000 miles	NOX	--	--	--	--	--	--	--	999.999

Certification Summary Information Report

Test Group		SFMXT02.02Y3			Evaporative/Refueling Family			SFMXR0125GDF	
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Both	
Vehicle Class		LDT2 (LVW 3751-5750, GVW 0-6000)			Standard Level			California LEV-III SULEV30	
Fuel		Gasoline			Test Procedure			US06	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	PM	--	--	--	--	--	--	--	0.006

Cert Region		Federal			Cert/In-Use Code			Both	
Vehicle Class		LDT2 (LVW 3751-5750, GVW 0-6000)			Standard Level			Federal Tier 3 Bin 30	
Fuel		Gasoline			Test Procedure			US06	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	PM	--	--	--	--	--	--	--	0.006

Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Both	
Vehicle Class		LDT2 (LVW 3751-5750, GVW 0-6000)			Standard Level			California LEV-III SULEV30	
Fuel		Gasoline			Test Procedure			Cold CO	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
50,000 miles	CO	--	--	--	--	--	--	--	12.5

Evaporative/Refueling Standards

Evaporative/Refueling Family		SFMXR0125GDF		Cert Region		Federal	
Cert/In-Use Code		Both		Standard Level		Federal Tier 3 Evap	
Test Procedure		2-day evap					
Fuel	Useful Life	Emission Name		Rounded Result		Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV		--		0.400	0.0000

Evaporative/Refueling Family		SFMXR0125GDF		Cert Region		Federal	
Cert/In-Use Code		Both		Standard Level		Federal Tier 3 Evap	
Test Procedure		Federal fuel 3-day evap					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.400	0.0000		

Certification Summary Information Report

Test Group		SFMXT02.02Y3		Evaporative/Refueling Family		SFMXR0125GDF	
Evaporative/Refueling Family		SFMXR0125GDF		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Both		Standard Level		California LEV-III Zero Evap (Option 2)	
Test Procedure		Federal fuel 3-day evap					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	OMHCE	--	0.400	0.0000		
Evaporative/Refueling Family		SFMXR0125GDF		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Both		Standard Level		California LEV-III Zero Evap (Option 2)	
Test Procedure		Federal Fuel Running Loss					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	OMHCE	--	0.05	0.002		
Evaporative/Refueling Family		SFMXR0125GDF		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Both		Standard Level		California LEV-III Zero Evap (Option 2)	
Test Procedure		Evap Canister Bleed Test					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	OMHCE	--	0.020	0		
Evaporative/Refueling Family		SFMXR0125GDF		Cert Region		Federal	
Cert/In-Use Code		Both		Standard Level		Federal Tier 3 Evap	
Test Procedure		Federal fuel refueling test (ORVR)					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.20	0.000		
Evaporative/Refueling Family		SFMXR0125GDF		Cert Region		Federal	
Cert/In-Use Code		Both		Standard Level		Federal Tier 3 Evap	
Test Procedure		Evap Canister Bleed Test					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.020	0		

Certification Summary Information Report

Test Group		SFMXT02.02Y3		Evaporative/Refueling Family		SFMXR0125GDF	
Evaporative/Refueling Family		SFMXR0125GDF		Cert Region		Federal	
Cert/In-Use Code		Both		Standard Level		Federal Tier 3 Evap	
Test Procedure		Federal Fuel Running Loss					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.05	0.002		
Evaporative/Refueling Family		SFMXR0125GDF		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Both		Standard Level		California LEV-III Zero Evap (Option 2)	
Test Procedure		2-day evap					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	OMHCE	--	0.400	0.0000		
Evaporative/Refueling Family		SFMXR0125GDF		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Both		Standard Level		California LEV-III Zero Evap (Option 2)	
Test Procedure		Federal fuel refueling test (ORVR)					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	OMHCE	--	0.20	0.000		

Certification Summary Information Report

Test Group		SFMXT02.02Y3	Evaporative/Refueling Family		SFMXR0125GDF
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		N2O	Nitrous Oxide	
CO	Carbon Monoxide		SPITBACK	Spitback Hydrocarbon in grams	
CO2	Carbon dioxide		AMP-HRS	Integrated Amp-hours	
CREE	Carbon-Related Exhaust Emissions		START-SOC	System Start State of Charge Watt-hours	
OPT-CREE	Optional Carbon-Related Exhaust Emissions		END-SOC	System End State of Charge Watt-hours	
NOX	Nitrogen Oxide		ACT-DISTANCE	Actual Distance Driven (miles)	
PM	Particulate Matter		AS-VOLT	Average System Voltage	
PM-COMP	SFTP Composite Particulate Matter		CO2 BAG 1	Bag 1 Carbon Dioxide	
HC-NM	Non-methane Hydrocarbon		CO2 BAG 2	Bag 2 Carbon Dioxide	
OMHCE	Organic material Hydrocarbon Equivalent		CO2 BAG 3	Bag 3 Carbon Dioxide	
OMNMHCE	Organic material non-methane HC equivalent		CO2 BAG 4	Bag 4 Carbon Dioxide	
NMOG	Non-methane organic gases		NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides	
HCHO	Formaldehyde		NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides	
H3C2HO	Acetaldehyde		DT-IWRR	Drive Trace Inertia Work Ratio Rating	
HC-NM+NOX	SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03		DT-ASCR	Drive Trace Absolute Speed Change Rating	
HC-NM+NOX-COMP	SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides		DT-EER	Drive Trace Energy Economy Rating	
CO-COMP	SFTP Composite Carbon Monoxide		COMB-CREE	Combined Carbon-Related Exhaust Emissions	
ETHANOL	C2H5OH - Ethanol		COMB-OPT-CREE	Combined Optional Carbon-Related Exhaust Emissions	
FE BAG 1	Bag 1 Fuel Economy		HC-TOTAL-EQUIV	Total Hydrocarbon equivalent - Evap only	
FE BAG 2	Bag 2 Fuel Economy		METHANE-COMB	Combined CH4 for HD 2b/3 vehicles only	
FE BAG 3	Bag 3 Fuel Economy		N2O-COMB	Combined Nitrous Oxide for HD 2b/3 vehicles only	
FE BAG 4	Bag 4 Fuel Economy		LEAK-DIA	Effective Leak Diameter (inches)	
MFR FE	Manufacturer Fuel Economy		LEAK-GAS CAP	Gas Cap Leakage (cc/min)	
HC	Hydrocarbon for Running Loss and ORVR		CO2-COMB	Combined Carbon Dioxide for HD 2b/3 Vehicles Only	
METHANE	CH4 - Methane		KW-HRS	Integrated DC KW-HRS	
METHANOL	CH3OH - Methanol				
Certification Region					
CA	California + CAA Section 177 states		FA	Federal	
Exhaust Emission Standard Level					
B1	Federal Tier 2 Bin 1		L3ULEV340	California LEV-III ULEV340	
B2	Federal Tier 2 Bin 2		L3ULEV250	California LEV-III ULEV250	
B3	Federal Tier 2 Bin 3		L3ULEV200	California LEV-III ULEV200	
B4	Federal Tier 2 Bin 4		L3SULEV170	California LEV-III SULEV170	

Certification Summary Information Report

Test Group		SFMXT02.02Y3	Evaporative/Refueling Family		SFMXR0125GDF
B5	Federal Tier 2 Bin 5		L3SULEV150	California LEV-III SULEV150	
B6	Federal Tier 2 Bin 6		L3LEV630	California LEV-III LEV630	
B7	Federal Tier 2 Bin 7		L3ULEV570	California LEV-III ULEV570	
B8	Federal Tier 2 Bin 8		L3ULEV400	California LEV-III ULEV400	
B9	Federal Tier 2 Bin 9		L3ULEV270	California LEV-III ULEV270	
B10	Federal Tier 2 Bin 10		L3SULEV230	California LEV-III SULEV230	
B11	Federal Tier 2 Bin 11		L3SULEV200	California LEV-III SULEV200	
HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)		T3B160	Federal Tier 3 Bin 160	
HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)		T3B125	Federal Tier 3 Bin 125	
L2	California LEV-II LEV		T3B110	Federal Tier 3 Transitional Bin 110	
L2OP	California LEV-II LEV Optional		T3B85	Federal Tier 3 Transitional Bin 85	
U2	California LEV-II ULEV		T3SULEV30	Federal Tier 3 Transitional LEV-II SULEV30 Carryover	
S2	California LEV-II SULEV		T3B70	Federal Tier 3 Bin 70	
ZEV	California ZEV		T3B50	Federal Tier 3 Bin 50	
OT	Other		T3B30	Federal Tier 3 Bin 30	
T1	Federal Tier 1		T3B20	Federal Tier 3 Bin 20	
PZEV	California PZEV		T3B0	Federal Tier 3 Bin 0	
L2LEV160	California LEV-II LEV160		HDV2B395	Federal Tier 3 HD Class 2b Transitional Bin 395	
L2ULEV125	California LEV-II ULEV125		HDV2B340	Federal Tier 3 HD Class 2b Transitional Bin 340	
L2SULEV30	California LEV-II SULEV30		HDV2B250	Federal Tier 3 HD Class 2b Bin 250	
L2LEV395	California LEV-II LEV395		HDV2B200	Federal Tier 3 HD Class 2b Bin 200	
L2ULEV340	California LEV-II ULEV340		HDV2B170	Federal Tier 3 HD Class 2b Bin 170	
L2LEV630	California LEV-II LEV630		HDV2B150	Federal Tier 3 HD Class 2b Bin 150	
L2ULEV570	California LEV-II ULEV570		HDV2B0	Federal Tier 3 HD Class 2b Bin 0	
L3LEV160	California LEV-III LEV160		HDV3B630	Federal Tier 3 HD Class 3 Transitional Bin 630	
L3ULEV125	California LEV-III ULEV125		HDV3B570	Federal Tier 3 HD Class 3 Transitional Bin 570	
L3ULEV70	California LEV-III ULEV70		HDV3B400	Federal Tier 3 HD Class 3 Bin 400	
L3ULEV50	California LEV-III ULEV50		HDV3B270	Federal Tier 3 HD Class 3 Bin 270	
L3SULEV30	California LEV-III SULEV30		HDV3B230	Federal Tier 3 HD Class 3 Bin 230	
L3SULEV20	California LEV-III SULEV20		HDV3B200	Federal Tier 3 HD Class 3 Bin 200	
L3LEV395	California LEV-III LEV395		HDV3B0	Federal Tier 3 HD Class 3 Bin 0	
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		
F	2-Wheel Drive, Front	A	All Wheel Drive		

Certification Summary Information Report

Test Group	SFMXT02.02Y3	Evaporative/Refueling Family	SFMXR0125GDF
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



SECTION 8

Emission Testing Waiver Statements

Refer to Section 14.01.00.00 of Common Section for
Statements of Compliance.



SECTION 8

Emission Testing Waiver Statements and Statements of Compliance

Statement of Compliance for test group SFMXT02.02Y3

Ford Motor Company's test and production vehicles do not have defeat devices. All AECDs have been declared and described in the application. This test group has been designed and engineered to comply with 40 CFR 86.1809-12 (prohibition of defeat devices), satisfies 40 CFR 86.1844-01 (application submittal requirements for AECDs), and does not utilize alternate emissions control maps that are unique for testing purposes relative to on road operation.

Is the transmission part of any AECD, for example, by receiving outputs from the ECU or providing inputs to the ECU, in any emission control strategy, for example, engine and/or catalyst warm-up?

If yes, please describe, including purpose, entry/exit conditions, actuations, and justifications.

Ford describes the transmission controls and potential interaction effects within the confidential AECD documentation found in section 6.05.00 of the common section area of the application submittals. This documentation covers the purpose, inputs, controlled actions, and justifications. For example, as referenced in the Drive Speed Control section of that document, the transmission can receive requests from the ECU to delay upshifts based on cold engine coolant temperature and/or low inferred catalyst temperature to assist with engine or catalyst warm-up.

Does the transmission behave and perform the same as, or differently than, while on road versus on a dynamometer?

Please explain any differences.

Ford does not attempt to discern whether the vehicle is operating on a dynamometer or on the road. However, there are certain conditions that can cause the transmission to operate differently based on the sensed inputs that may not be encountered during dynamometer testing. For example, when climbing grades or when towing, the transmission will make gear ratio adjustments to compensate against excessive engine lugging and reduced vehicle response. There can also be unique transmission scheduling in different customer selectable drive modes, such as EcoSelect, Sport, Snow, Rock Crawl, etc. The types of conditions that are anticipated to cause transmission adjustments are described in the confidential AECD descriptions located in 16.05.00 of the common section. For customer-selectable drive modes that could reasonably be driven over emission test cycles, Ford evaluates emission performance to assure that these modes meet applicable emission standards.

Special dynamometer test modes are required for certain vehicle technologies such as start/stop and HEVs to assure that fault conditions are not set while operating on two-wheel drive dynamometers. This allows the vehicles to behave normally, as they would on the road, rather than causing default/FMEM actions to occur due to significant wheel speed differences between the front and rear axles.

For additional statements of compliance, please refer to Section 14.01.00.00 of the Common Section.



SECTION 9

OBD-II System Description

For a description of the OBD System utilized for this Test Group, refer to Section 16.06.00.00 of the Common Section.



SECTION 10

Description of Alternate-Fueled Vehicles

For a description of the Alternate-Fueled vehicles covered by this Test Group, refer to Section 12.00.00.00 (Description of Vehicles Covered by Certificate and Test Parameters) of this Application.



SECTION 11

AECD Description

For a description of the AECDs utilized in this Test Group,
refer to Section 16.00.05.00 of this application,
and 16.05 of the Common Section.

Auxiliary Emission Control Device (AECD) Attestation eForm

Please select the applicable market(s)

- ☐ Australia / China / Europe / EU based countries
- ☐ Brazil
- ☒ U.S. / Canada / Mexico / South Korea / U.S. based countries
- ☐ Other

U.S. / Canada / Mexico / South Korea / U.S. based countries AECD Attestation:

U.S. / Canada / Mexico / South Korea / U.S. based countries AECD Statement

The following attestation is provided to support the certification requirements for proper Auxiliary Emissions Control Device (AECD)¹ implementation and disclosure. This attestation covers the calibration content and its interactions with emissions-relevant hardware and control strategies, including those developed by outside vendors that are released under the responsibility of the attesting P/T Calibration Supervisor.

My team and/or I have reviewed the Defeat Device Decision Tree², relevant VH&C policy documents, calibration guidelines (including APR and Cal-Check limits), and the AECD descriptions³ applicable to this test group. Based on these reviews and/or consultation with VH&C, I attest that, to the best of my knowledge, **all AECDs within the subject test group:**

YES (check each box below to confirm)

- ☒ 1. Are **implemented in accordance with the defeat device regulations** as described in the decision tree.
- ☒ 2. Are **described and properly justified in the application for emissions certification** (i.e., the AECD Descriptions³ and the Part-1 Calibration Description Pages).

For <8,500lb or MDPV programs that have Green House Gas (GHG) or cold/20° F NMHC requirements, please confirm the following additional requirements:

YES N/A (check "YES" to confirm or "N/A" if cold requirements are not applicable)

- ☒

☐

1. AECDs not expected to generate a discontinuity⁴ in FTP or Highway emissions control behavior in the intermediate temperature range between 20° and 86° F for CO, CO₂, NOx, N₂O, CH₄, NMOG, and HCHO⁵ when evaluating actual FTP/HFET test results within this temperature range.
- ☒

☐

2. For vehicles that comply with GHG or cold temperature NMHC requirements at sea-level, common calibration approaches⁶ are utilized at high altitude conditions or are otherwise documented as an AECD.
- ☐

☒

3. For multi-fuel/FFV vehicles that comply with cold temperature NMHC requirements on gasoline, common calibration approaches are utilized relative to cold NMHC performance regardless of fuel type or are otherwise documented as an AECD.

See Footnotes

AECD Approval:

Title	Approver CDSID	Decision	Comments	Decision Date
Supervisor, PCCN-NAE Engine Calibration / OBD	jduclos	Approved		07/24/2024

Request for Approval



SECTION 12

Description of Vehicles Covered by Certificate and Testing Parameters

12.00.01.00 Common Family Parameters

Test Group: SFMXT02.02Y3

Test Group Information :	
Vehicle/Engine Class	LDT2
Vehicle Fuel Category	Single Fuel
Operating Fuel 1	Gasoline
Operating Fuel 2	N/A
Engine Displacement (liters)	2.0
SAE net HP @ RPM (98 Ron)	250 @ 5500 RPM
SAE net torque ft-lb @ RPM	277 @ 3000 RPM
VECI - Emission Control System	
Air Aspiration Method	Turbocharged
Charge Air Cooler Type	Air
Exhaust Gas Recirculation (EGR)	Yes
Cooled EGR	Yes
Air injection Type (AIR)	Not Applicable
After-Treatment Type	Three-way catalyst
Fuel Metering System 1	Spark Ignition direct & ported injection
Fuel Metering System 2	N/A
Heated oxygen sensor (HO2S)	Yes
Heated Air/Fuel Sensor or WR oxygen sensor (AFS/WR-HO2S)	Yes
Feedback Sensor Configuration	WR-HO2S, HO2S
Shift Schedules	See Common Section
EVAP Canister working Capacity	See Common Section
EVAP Canister Bed Volume	See Common Section
Fuel Tank Temperature Profile	See Common Section

Calibration Descriptions - SFMXT02.02Y3

Exhaust Calibration	Evaporative Calibration	Application	Transmission	Leak Check	Vehicle
SCHDE3NA06/R07	SFMXR0125GDF	50S (CAL)	A/T	0.020	2.0L Bronco Sport 4WD
SCHDE3SA06/R07	SFMXR0125GDF	50S (CAL)	A/T	0.020	2.0L Bronco Sport 4WD
SCFEE3NF06	SFMXR0125GDF	50S (CAL)	A/T	0.020	2.0L Maverick AWD
SCFEE3SF06	SFMXR0125GDF	50S (CAL)	A/T	0.020	2.0L Maverick AWD
SCFEE3NV06	SFMXR0125GDF	50S (CAL)	A/T	0.020	2.0L Maverick Tremor AWD
SCFEE3SV06	SFMXR0125GDF	50S (CAL)	A/T	0.020	2.0L Maverick Tremor AWD
SCFEE3NF07	SFMXR0125GDF	50S (CAL)	A/T	0.020	2.0L Maverick AWD & Maverick Tremor AWD (R07+)
SCFEE3SF07	SFMXR0125GDF	50S (CAL)	A/T	0.020	2.0L Maverick AWD & Maverick Tremor AWD (R07+)
SCFEE3NM06/R07	SFMXR0125GDF	50S (CAL)	A/T	0.020	2.0L Maverick Lobo AWD
SCFEE3SM06/R07	SFMXR0125GDF	50S (CAL)	A/T	0.020	2.0L Maverick Lobo AWD

Reference Specifications		
Spark Plug	Part# ML3E-12405-FA Gap: 0.8 (+0/-0.1mm)	
Ignition Timing °BTDC (No SPOUT connector)	PCM Controlled	
Idle RPM	PCM Controlled	
Target (Base) in Drive (A/C OFF/ A/C ON)	A/T: 750/815 rpm	Special conditions which may require idle speeds higher than base are listed below. (See Section 16.05 for descriptions of these strategies):
In Neutral	A/T: 750/815 rpm	

Potential Idle/Drive Speed Modifier	Function Utilized (Y/N)	Purpose
Low or high air charge temperature	Y	Heater, A/C or engine cooling performance
Low catalyst temperature	N	Achieve/maintain light off
Low engine coolant temperature	Y	Combustion stability
Low or high ambient temperature	Y	Heater or A/C performance
High transmission oil temperature	N	Ensure adequate fluid pressure
Low battery voltage	Y	Avoid stalling or no-start
High Alternator load	N	Preserve battery life and avoid low voltage
High-speed fan operation	N	For engine and A/C condenser cooling
Extended neutral idle time	N	Maintain catalyst temperature
Power steering pressure	N	Ensure adequate P/S assistance
High Altitude	Y	Maintain air mass flow to avoid stalling
Alternate calibration	Y	Avoid spark plug fouling during plant/dealer handling
Drive Speed Control or Shift Delay	Y	Increase engine speed to improve cabin heating or cooling
Heated Windshield	N	Maintain charging margin
ETC Failure	Y	Electronic Throttle Failure Min RPM

Emission Component	Sensed Parameter	Controlled Parameter	Justification ¹	Calibration
ELECTRONICS – PCM ²				
<u>FUEL</u>				
Fuel Injector - PFI	Signal from PCM	Fuel Flow	N/A	Static Flow Rate: 139 +/- 4.45 g/min
Fuel Injector - DI	Signal from PCM	Fuel Flow	N/A	Static Flow Rate: 697.8 g/min +/- 5.5%
Regulated Fuel Pressure	Signal from PCM	Fuel Pressure	N/A	CLPC
Fuel Pump	Signal from PCM	Fuel Flow	N/A	Rated flow: 570 kPa @ 12V (minimum flow)
Torque Based Electronic Throttle Control	Signal from PCM	None	Operates in FTP	Throttle Diameter: 52 mm
<u>Fuel System Control Strategy²</u>				
Air-fuel enrichment for driver torque demand	Throttle Position or Pedal Position or Engine LOAD, and Engine RPM	Air-Fuel Ratio (LAMBSE)	Protection against damage or accident; provides additional power under extended torque demand	See Section 16.00.05.00 for air-fuel calibration (LAMBSE) in function FN311P
Air-Fuel enrichment for driver torque demand delay	Time and Gear	Air-Fuel Ratio (LAMBSE)	Allows time for downshift; limit enrichment to unusual conditions	See Section 16.00.05.00 for delay time calibration FN1311
Air-fuel Enrichment For Catalyst Protection	Inferred Catalyst Temperature	Air-Fuel Ratio (LAMBSE)	Protection against damage	See Section 16.00.05.00 for inferred catalyst temperature to trigger enrichment, either CAT_MAX_CL or CAT_MAX_LO and CAT_MAX_HI and the time delay on CAT_TMR_THRES
Air-fuel Enrichment For Engine Protection	Engine Coolant Temperature (ECT)	Air-Fuel Ratio (LAMBSE)	Protection against damage	See Section 16.00.05.00 for max engine coolant temperature to trigger enrichment, OL_ECT_HOT_S

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Air-fuel Enrichment For O2 Sensor Protection	Inferred Oxygen Sensor Temperature	Air-Fuel Ratio (LAMBSE)	Protection against damage	See Section 16.00.05.00 for inferred O2 Sensor temperature to trigger enrichment, FEGO_MAX
Air-fuel Enrichment For Engine/Exhaust Manifold Protection	Inferred Exhaust Manifold Flange Temperature	Air-Fuel Ratio (LAMBSE)	Protection against damage	See Section 16.00.05.00 for inferred exhaust flange temperature, FLN_MAX_CL or FLN_MAX_LO and FLN_MAX_HI and the time delay on FLN_MAX_LO, FLN_TMR_THRES
Air-fuel Enrichment following Deceleration Fuel Shut-Off (DFSO)	Injector state, inferred catalyst O ₂ stored, and CMS voltage	Air-Fuel Ratio (LAMBSE)	Substantially demonstrated on FTP	See Section 16.00.05.00 for air-fuel ratio utilized following fuel shut-off event, LAM_REACT

Emission Component	Sensed Parameter	Controlled Parameter	Justification ¹	Calibration
<u>CRANKCASE</u> Crankcase Ventilation Oil Separator Assembly	Manifold Vacuum	Air Flow to Engine	Operates in FTP	15.0-19.0 LPM @ -60.0kPa 31.0-39.0 LPM @ -46.7 kPa 41.0-49.0 LPM @ -26.7 kPa 41.0-49.0 LPM @ -13.3 kPa
Crankcase Ventilation Oil Separator Assembly – Not Heated	Ambient Temp Battery Voltage	PCV Heating	Vehicle Safety	N/A

Emission Component	Sensed Parameter	Controlled Parameter	Justification ¹	Calibration
<u>EGR Control Strategy</u>				
EGR base table	Requested Torque, Percent Torque, Engine Speed, and Load	EGR Rate	Substantially demonstrated on FTP/SFTP. Base EGR optimized for fuel efficiency within constraints of combustion stability, drivability, emissions, and vacuum limitations	See Section 16.00.05.00 for the following tables: HDFX_EGR_MAXTOL_STP_0 (intake cam position = 0 degrees)
EGR Limitation/Delay for Cold Engine Temperatures	Engine Coolant Temperature (ECT)	Multiplier on EGR Rate	Substantially demonstrated on FTP (ambient and 20F). Required to ensure proper combustion stability.	See Section 16.00.05.00 for function HDFX_EGR_ECT_MUL_0 (Note: other functions are used based on intake cam timing position, but all functions calibrated the same.)

Emission Component	Sensed Parameter	Controlled Parameter	Justification ¹	Calibration
<u>VCT Control Strategy</u>				
BASE Cam timing	Requested Engine Speed and Load	Cam Phase Timing	Demonstrated on FTP ³	See Section 16.00.05.00 for FNHDFX_BEST_FE_DIST
Cam Timing Limitation for Combustion Stability	Engine Speed	Cam Phase Timing	Protection against damage or accident	See Section 16.00.05.00 for FNHDFX_VCT_LIM_N_INT
Cam Actuator Limitation for start-up	Engine Coolant Temp. at start and time-since-start	Cam Phase Timing	Protection against damage or accident	See Section 16.00.05.00 for FNHDFX_VCT_COMB_STAB_EXH and FNHDFX_VCT_COMB_STAB_INT
Cam Limitation under High Torque Demand	Engine Speed and Requested Torque	Cam Phase Timing or Throttle Position	Protection against damage or accident	See Section 16.00.05.00 for FNHDFX_BEST_DRIVE_DIST
BASE Cam timing	Requested Engine Speed and Load	Cam Phase Timing	Demonstrated on FTP ³	See Section 16.00.05.00 for FNHDFX_BEST_FE_DIST

Emission Component	Sensed Parameter	Controlled Parameter	Justification ¹	Calibration
<u>ENGINE COOLING</u>				
Thermostat	Coolant Temperature	Coolant Flow	Engine Protection	Start to Open: 90.0°C – 93.8°C

1 – Justification provided for AECD systems (i.e. sense operating conditions and control the function of an emission component) and not for the individual components.

2 – See Section 16.05 for Strategy Control Systems descriptions

3 – "FTP" represents all tests required for certification

* – indicates that ending characters on some parameter names may vary

2025 MY Exhaust Emissions Parts List

Test Group: SFMXT02.02Y3

Vehicle	Certification Level	Calibration	Cert Code	PCM Part Number	Date
Bronco Sport 4WD	Initial	SCHDE3NA06	SCHDE3NA0003	PS1PA-12A650-CD	8/22/2024
		SCHDE3SA06	SCHDE3SA0003	PS1PA-12A650-DD	8/22/2024
	2Y3-001	SCHDE3NA07	SCHDE3NA0004	PS1PA-12A650-CE	11/8/2024
		SCHDE3SA07	SCHDE3SA0004	PS1PA-12A650-DE	11/8/2024
Maverick AWD	Initial	SCFEE3NF06	SCFEE3NF0003	PSZ6A-12A650-LD	8/22/2024
		SCFEE3SF06	SCFEE3SF0003	PSZ6A-12A650-PD	8/22/2024
	2Y3-001	SCFEE3NF07	SCFEE3NF0004	PSZ6A-12A650-LE	11/8/2024
		SCFEE3SF07	SCFEE3SF0004	PSZ6A-12A650-PE	11/8/2024
Maverick Tremor AWD	Initial	SCFEE3NV06	SCFEE3NV0003	PSZ6A-12A650-MD	8/22/2024
		SCFEE3SV06	SCFEE3SV0003	PSZ6A-12A650-SD	8/22/2024
	2Y3-001	SCFEE3NF07	SCFEE3NF0004	PSZ6A-12A650-LE	11/8/2024
		SCFEE3SF07	SCFEE3SF0004	PSZ6A-12A650-PE	11/8/2024
Maverick Lobo AWD	Initial	SCFEE3NM06	SCFEE3NM0003	PSZ6A-12A650-ND	8/22/2024
		SCFEE3SM06	SCFEE3SM0003	PSZ6A-12A650-TD	8/22/2024
	2Y3-001	SCFEE3NM07	SCFEE3NM0004	PSZ6A-12A650-NE	11/8/2024
		SCFEE3SM07	SCFEE3SM0004	PSZ6A-12A650-TE	11/8/2024

2025 MY Exhaust Emissions Parts List
Test Group: SFMXT02.02Y3
****ALL OTHER EXHAUST EMISSION PARTS****

Part Name	Part Number(s)
Catalyst (CC)	PZ13-5E211-AE
Catalyst (UB)	PZ13-5E212-AC
Engine Coolant Temperature Sensor	P2GA-12A648-AB
Knock Sensor	JR3A-12A699-AA
Mass Air Flow Sensor	JX6A-12B579-EB
Camshaft Position Sensor Assembly	P2GA-12K073-BB
Crankcase Ventilation Oil Separator Assembly	P2GE-6A785-BC
Variable Camshaft Timing (VCT) Solenoid	P2GE-6B297-AC
Crank Position Sensor	P2GA-6C315-AC
Cylinder Head Temperature Sensor	P2GA-6G004-AC
Cam Cover & Gasket Assembly	P2GE-6K271-AE
Charge Air Cooler	LX61-6K775-EB LX61-6K775-BD (Alt)
Fuel Pump (Low Pressure, In-Tank)	LX61-9350-AA
Fuel Pump (High Pressure)	P2GE-9D376-AA
EGR Valve	P2GE-9D475-AE
EGR Cooler Assembly	P2GE-9F464-AC
EGR Pressure Sensor	P2GA-9G932-BC P2GA-9G932-DB (Alt)
EGR Cooler Outlet Temperature Sensor	P2GA-9U498-AC P2GA-9U498-AD (Alt)
Manifold Absolute Pressure Sensor	LV2A-9F479-BA
Fuel Pressure Sensor (High Pressure)	P2GE-9F972-AA
Fuel Pressure Sensor (Low Pressure)	P2GE-9F972-BA
Electric Throttle Body	P2GE-9F991-AC
Fuel Injector (DI)	P2GE-9G929-AA P2GE-9G929-BA (Alt)
Fuel Injector (PFI)	P2GE-9F593-AA
Turbo Charger	P2GE-9G438-AE P2GE-9G438-AF (Alt) P2GE-9G438-AG (Alt)
Heated Oxygen Sensor – HO2S (CMS)	PZ11-9G444-CA
Wide-Range Universal Heated Oxygen Sensor (UEGO)	PZ11-9Y460-AC

Vehicle Description Report

Application: 50ST

Test Group: SFMXT02.02Y3

ID Number	5251042	5251041	5251044	5251045	5252081	5252086	5252084	5252089
Displacement	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Cert Code	SCHDE3NA0003	SCHDE3NA0003	SCHDE3SA0003	SCHDE3SA0003	SCFEE3NF0003	SCFEE3SF0003	SCFEE3NM0003	SCFEE3SM0003
Fuel Tank(s)	P2	P2	P2	P2	Q1	Q1	Q1	Q1
Carline	BRONCO SPORT 4WD	BRONCO SPORT 4WD	BRONCO SPORT 4WD	BRONCO SPORT 4WD	MAVERICK AWD	MAVERICK AWD	MAVERICK LOBO AWD	MAVERICK LOBO AWD
Wheel Configuration	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Body Style	4 Door	4 Door	4 Door	4 Door	Super Crew	Super Crew	Super Crew	Super Crew
Wheelbase	105.1	105.1	105.1	105.1	121.1	121.1	121.1	121.1
Transcode Combo	GM381K	GM381K	GM381K	GM381K	GM381K	GM381K	GM381K	GM381K
Curb Weight	3847	3864	3847	3864	3782	3782	3889	3889
ETW	4250	4250	4250	4250	4000	4000	4250	4250
Loaded Weight LVW	4147	4164	4147	4164	4082	4082	4189	4189
ALVW-ETW	4250	4500	4250	4500	4500	4500	4500	4500
Adj. Loaded Weight	4364	4387	4364	4387	4511	4511	4430	4430
GVWR	4880	4910	4880	4910	5240	5240	4970	4970
Min Axle Ratio	3.8	3.8	3.8	3.8	3.81	3.81	3.81	3.81
Max Axle Ratio	3.8	3.8	3.8	3.8	3.81	3.81	3.81	3.81
Min N/V Ratio	28.6	28.1	28.6	28.1	28.4	28.4	28.4	28.4
Max N/V Ratio	28.6	28.1	28.6	28.1	28.6	28.6	28.4	28.4
Emission Vehicle Class	LDT2	LDT2	LDT2	LDT2	LDT2	LDT2	LDT2	LDT2
Drive Code	4-Wheel Drive	4-Wheel Drive	4-Wheel Drive	4-Wheel Drive	Part-time 4-Wheel Drive	Part-time 4-Wheel Drive	4-Wheel Drive	4-Wheel Drive
Trans Type	Semi-Automatic	Semi-Automatic	Semi-Automatic	Semi-Automatic	Automatic	Automatic	Semi-Automatic	Semi-Automatic
Calibration Application	50ST	50ST	50ST	50ST	50ST	50ST	50ST	50ST
Min Tire Size	225/65R17 - 28.6	P235/65R17 - 28.1	225/65R17 - 28.6	P235/65R17 - 28.1	225/65R17 - 28.6	225/65R17 - 28.6	225/55R19 - 28.4	225/55R19 - 28.4
Max Tire Size	225/65R17 - 28.6	P235/65R17 - 28.1	225/65R17 - 28.6	P235/65R17 - 28.1	225/55R19 - 28.4	225/55R19 - 28.4	225/55R19 - 28.4	225/55R19 - 28.4
Alt Tire 1								
Alt Tire 2								
Alt Tire 3								
Alt Tire 4								
Alt Tire 5								
Alt Tire 6								
Alt Tire 7								
DAW Full Tank	2205	2222	2205	2222	2189	2189	2264	2264
DAW Empty Tank	2183	2200	2183	2200	2171	2171	2245	2245

Vehicle Description Report

Application: 50ST

Test Group: SFMXT02.02Y3

ID Number	5252085	5252090
Displacement	2.0	2.0
Cert Code	SCFEE3NV0003	SCFEE3SV0003
Fuel Tank(s)	Q1	Q1
Carline	MAVERICK TREMOR AWD	MAVERICK TREMOR AWD
Wheel Configuration	Standard	Standard
Body Style	Super Crew	Super Crew
Wheelbase	121.1	121.1
Transcode Combo	GM381K	GM381K
Curb Weight	3944	3944
ETW	4250	4250
Loaded Weight LVW	4244	4244
ALVW-ETW	4500	4500
Adj. Loaded Weight	4517	4517
GVWR	5090	5090
Min Axle Ratio	3.81	3.81
Max Axle Ratio	3.81	3.81
Min N/V Ratio	28.1	28.1
Max N/V Ratio	28.1	28.1
Emission Vehicle Class	LDT2	LDT2
Drive Code	4-Wheel Drive	4-Wheel Drive
Trans Type	Semi-Automatic	Semi-Automatic
Calibration Application	50ST	50ST
Min Tire Size	235/65R17 - 28.1	235/65R17 - 28.1
Max Tire Size	235/65R17 - 28.1	235/65R17 - 28.1
Alt Tire 1		
Alt Tire 2		
Alt Tire 3		
Alt Tire 4		
Alt Tire 5		
Alt Tire 6		
Alt Tire 7		
DAW Full Tank	2253	2253
DAW Empty Tank	2235	2235

2025 MY Exhaust Emissions Parts List

Test Group: SFMXT02.02Y3

Vehicle	Certification Level	Calibration	Cert Code	PCM Part Number	Date
Bronco Sport 4WD	Initial	SCHDE3NA06	SCHDE3NA0003	PS1PA-12A650-CD	8/22/2024
		SCHDE3SA06	SCHDE3SA0003	PS1PA-12A650-DD	8/22/2024
	2Y3-001	SCHDE3NA07	SCHDE3NA0004	PS1PA-12A650-CE	11/8/2024
		SCHDE3SA07	SCHDE3SA0004	PS1PA-12A650-DE	11/8/2024
Maverick AWD	Initial	SCFEE3NF06	SCFEE3NF0003	PSZ6A-12A650-LD	8/22/2024
		SCFEE3SF06	SCFEE3SF0003	PSZ6A-12A650-PD	8/22/2024
	2Y3-001	SCFEE3NF07	SCFEE3NF0004	PSZ6A-12A650-LE	11/8/2024
		SCFEE3SF07	SCFEE3SF0004	PSZ6A-12A650-PE	11/8/2024
Maverick Tremor AWD	Initial	SCFEE3NV06	SCFEE3NV0003	PSZ6A-12A650-MD	8/22/2024
		SCFEE3SV06	SCFEE3SV0003	PSZ6A-12A650-SD	8/22/2024
	2Y3-001	SCFEE3NF07	SCFEE3NF0004	PSZ6A-12A650-LE	11/8/2024
		SCFEE3SF07	SCFEE3SF0004	PSZ6A-12A650-PE	11/8/2024
Maverick Lobo AWD	Initial	SCFEE3NM06	SCFEE3NM0003	PSZ6A-12A650-ND	8/22/2024
		SCFEE3SM06	SCFEE3SM0003	PSZ6A-12A650-TD	8/22/2024
	2Y3-001	SCFEE3NM07	SCFEE3NM0004	PSZ6A-12A650-NE	11/8/2024
		SCFEE3SM07	SCFEE3SM0004	PSZ6A-12A650-TE	11/8/2024

2025 MY Exhaust Emissions Parts List
Test Group: SFMXT02.02Y3
****ALL OTHER EXHAUST EMISSION PARTS****

Part Name	Part Number(s)
Catalyst (CC)	PZ13-5E211-AE
Catalyst (UB)	PZ13-5E212-AC
Engine Coolant Temperature Sensor	P2GA-12A648-AB
Knock Sensor	JR3A-12A699-AA
Mass Air Flow Sensor	JX6A-12B579-EB
Camshaft Position Sensor Assembly	P2GA-12K073-BB
Crankcase Ventilation Oil Separator Assembly	P2GE-6A785-BC
Variable Camshaft Timing (VCT) Solenoid	P2GE-6B297-AC
Crank Position Sensor	P2GA-6C315-AC
Cylinder Head Temperature Sensor	P2GA-6G004-AC
Cam Cover & Gasket Assembly	P2GE-6K271-AE
Charge Air Cooler	LX61-6K775-EB LX61-6K775-BD (Alt)
Fuel Pump (Low Pressure, In-Tank)	LX61-9350-AA
Fuel Pump (High Pressure)	P2GE-9D376-AA
EGR Valve	P2GE-9D475-AE
EGR Cooler Assembly	P2GE-9F464-AC
EGR Pressure Sensor	P2GA-9G932-BC P2GA-9G932-DB (Alt)
EGR Cooler Outlet Temperature Sensor	P2GA-9U498-AC P2GA-9U498-AD (Alt)
Manifold Absolute Pressure Sensor	LV2A-9F479-BA
Fuel Pressure Sensor (High Pressure)	P2GE-9F972-AA
Fuel Pressure Sensor (Low Pressure)	P2GE-9F972-BA
Electric Throttle Body	P2GE-9F991-AC
Fuel Injector (DI)	P2GE-9G929-AA P2GE-9G929-BA (Alt)
Fuel Injector (PFI)	P2GE-9F593-AA
Turbo Charger	P2GE-9G438-AE P2GE-9G438-AF (Alt) P2GE-9G438-AG (Alt)
Heated Oxygen Sensor – HO2S (CMS)	PZ11-9G444-CA
Wide-Range Universal Heated Oxygen Sensor (UEGO)	PZ11-9Y460-AC

Vehicle Description Report

Application: 50ST

Test Group: SFMXT02.02Y3

ID Number	5251042	5251041	5251044	5251045	5252081	5252086	5252084	5252089
Displacement	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Cert Code	SCHDE3NA0003	SCHDE3NA0003	SCHDE3SA0003	SCHDE3SA0003	SCFEE3NF0003	SCFEE3SF0003	SCFEE3NM0003	SCFEE3SM0003
Fuel Tank(s)	P2	P2	P2	P2	Q1	Q1	Q1	Q1
Carline	BRONCO SPORT 4WD	BRONCO SPORT 4WD	BRONCO SPORT 4WD	BRONCO SPORT 4WD	MAVERICK AWD	MAVERICK AWD	MAVERICK LOBO AWD	MAVERICK LOBO AWD
Wheel Configuration	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Body Style	4 Door	4 Door	4 Door	4 Door	Super Crew	Super Crew	Super Crew	Super Crew
Wheelbase	105.1	105.1	105.1	105.1	121.1	121.1	121.1	121.1
Transcode Combo	GM381K	GM381K	GM381K	GM381K	GM381K	GM381K	GM381K	GM381K
Curb Weight	3847	3864	3847	3864	3782	3782	3889	3889
ETW	4250	4250	4250	4250	4000	4000	4250	4250
Loaded Weight LVW	4147	4164	4147	4164	4082	4082	4189	4189
ALVW-ETW	4250	4500	4250	4500	4500	4500	4500	4500
Adj. Loaded Weight	4364	4387	4364	4387	4511	4511	4430	4430
GVWR	4880	4910	4880	4910	5240	5240	4970	4970
Min Axle Ratio	3.8	3.8	3.8	3.8	3.81	3.81	3.81	3.81
Max Axle Ratio	3.8	3.8	3.8	3.8	3.81	3.81	3.81	3.81
Min N/V Ratio	28.6	28.1	28.6	28.1	28.4	28.4	28.4	28.4
Max N/V Ratio	28.6	28.1	28.6	28.1	28.6	28.6	28.4	28.4
Emission Vehicle Class	LDT2	LDT2	LDT2	LDT2	LDT2	LDT2	LDT2	LDT2
Drive Code	4-Wheel Drive	4-Wheel Drive	4-Wheel Drive	4-Wheel Drive	Part-time 4-Wheel Drive	Part-time 4-Wheel Drive	4-Wheel Drive	4-Wheel Drive
Trans Type	Semi-Automatic	Semi-Automatic	Semi-Automatic	Semi-Automatic	Automatic	Automatic	Semi-Automatic	Semi-Automatic
Calibration Application	50ST	50ST	50ST	50ST	50ST	50ST	50ST	50ST
Min Tire Size	225/65R17 - 28.6	P235/65R17 - 28.1	225/65R17 - 28.6	P235/65R17 - 28.1	225/65R17 - 28.6	225/65R17 - 28.6	225/55R19 - 28.4	225/55R19 - 28.4
Max Tire Size	225/65R17 - 28.6	P235/65R17 - 28.1	225/65R17 - 28.6	P235/65R17 - 28.1	225/55R19 - 28.4	225/55R19 - 28.4	225/55R19 - 28.4	225/55R19 - 28.4
Alt Tire 1								
Alt Tire 2								
Alt Tire 3								
Alt Tire 4								
Alt Tire 5								
Alt Tire 6								
Alt Tire 7								
DAW Full Tank	2205	2222	2205	2222	2189	2189	2264	2264
DAW Empty Tank	2183	2200	2183	2200	2171	2171	2245	2245

Vehicle Description Report

Application: 50ST

Test Group: SFMXT02.02Y3

ID Number	5252085	5252090
Displacement	2.0	2.0
Cert Code	SCFEE3NV0003	SCFEE3SV0003
Fuel Tank(s)	Q1	Q1
Carline	MAVERICK TREMOR AWD	MAVERICK TREMOR AWD
Wheel Configuration	Standard	Standard
Body Style	Super Crew	Super Crew
Wheelbase	121.1	121.1
Transcode Combo	GM381K	GM381K
Curb Weight	3944	3944
ETW	4250	4250
Loaded Weight LVW	4244	4244
ALVW-ETW	4500	4500
Adj. Loaded Weight	4517	4517
GVWR	5090	5090
Min Axle Ratio	3.81	3.81
Max Axle Ratio	3.81	3.81
Min N/V Ratio	28.1	28.1
Max N/V Ratio	28.1	28.1
Emission Vehicle Class	LDT2	LDT2
Drive Code	4-Wheel Drive	4-Wheel Drive
Trans Type	Semi-Automatic	Semi-Automatic
Calibration Application	50ST	50ST
Min Tire Size	235/65R17 - 28.1	235/65R17 - 28.1
Max Tire Size	235/65R17 - 28.1	235/65R17 - 28.1
Alt Tire 1		
Alt Tire 2		
Alt Tire 3		
Alt Tire 4		
Alt Tire 5		
Alt Tire 6		
Alt Tire 7		
DAW Full Tank	2253	2253
DAW Empty Tank	2235	2235

Vehicle Description Report

Application: 50ST

Test Group: SFMXT02.02Y3

ID Number	5260227	5260226	5253148	5253149	5260229	5260228
Displacement	2.0	2.0	2.0	2.0	2.0	2.0
Cert Code	SCHDE3NA0004	SCHDE3NA0004	SCHDE3SA0003	SCHDE3SA0003	SCHDE3SA0004	SCHDE3SA0004
Fuel Tank(s)	P2	P2	P2	P2	P2	P2
Carline	BRONCO SPORT 4WD	BRONCO SPORT 4WD	BRONCO SPORT 4WD	BRONCO SPORT 4WD	BRONCO SPORT 4WD	BRONCO SPORT 4WD
Wheel Configuration	Standard	Standard	Standard	Standard	Standard	Standard
Body Style	4 Door	4 Door	4 Door	4 Door	4 Door	4 Door
Wheelbase	105.1	105.1	105.1	105.1	105.1	105.1
Transcode Combo	GM381K	GM381K	GM381K	GM381K	GM381K	GM381K
Curb Weight	3847	3864	3847	3864	3847	3864
ETW	4250	4250	4250	4250	4250	4250
Loaded Weight LVW	4147	4164	4147	4164	4147	4164
ALVW-ETW	4250	4500	4250	4500	4250	4500
Adj. Loaded Weight	4364	4387	4364	4387	4364	4387
GVWR	4880	4910	4880	4910	4880	4910
Min Axle Ratio	3.8	3.8	3.8	3.8	3.8	3.8
Max Axle Ratio	3.8	3.8	3.8	3.8	3.8	3.8
Min N/V Ratio	28.6	28.1	28.6	28.1	28.6	28.1
Max N/V Ratio	28.6	28.1	28.6	28.1	28.6	28.1
Emission Vehicle Class	LDT2	LDT2	LDT2	LDT2	LDT2	LDT2
Drive Code	4-Wheel Drive	4-Wheel Drive	4-Wheel Drive	4-Wheel Drive	4-Wheel Drive	4-Wheel Drive
Trans Type	Semi-Automatic	Semi-Automatic	Semi-Automatic	Semi-Automatic	Semi-Automatic	Semi-Automatic
Calibration Application	50ST	50ST	MEX	MEX	MEX	MEX
Min Tire Size	225/65R17 - 28.6	P235/65R17 - 28.1	225/65R17 - 28.6	P235/65R17 - 28.1	225/65R17 - 28.6	P235/65R17 - 28.1
Max Tire Size	225/65R17 - 28.6	P235/65R17 - 28.1	225/65R17 - 28.6	P235/65R17 - 28.1	225/65R17 - 28.6	P235/65R17 - 28.1
Alt Tire 1						
Alt Tire 2						
Alt Tire 3						
Alt Tire 4						
Alt Tire 5						
Alt Tire 6						
Alt Tire 7						
DAW Full Tank	2205	2222	2205	2222	2205	2222
DAW Empty Tank	2183	2200	2183	2200	2183	2200



SECTION 14

Request for Certification



**Emissions Certification,
Homologation, & Compliance**

**Allen Park Test Laboratory
1500 Enterprise Drive, Suite 3W-200
Allen Park, Michigan 48101-2053**

August 30, 2024

Mr. Tristin Rojeck
Certification Division
Mobile Source Pollution Control
U. S. Environmental Protection Agency
2000 Traverwood Drive
Ann Arbor, Michigan 48105

Dear Mr. Rojeck:

Ford Motor Company (Ford) herewith submits its Part I Application for Certification for 2025 model year gasoline powered light-duty trucks (LDTs) contained in Ford's 50 states test group SFMXT02.02Y3 and evaporative emission family SFMXR0125GDF. Tier 3 E10 regular fuel was used for Exhaust and Evaporative emission testing. This test group is being certified to the Federal T3B30 standards and is counted as LEVIII / SULEV30 under the California standards.

The EPA Tier 3 certification and in-use exhaust emission standards applicable to this test group are:

Certification & In-Use FTP Standards	Useful Life (mi)	NMOG + NOx (g/mi)	CO (g/mi)	N2O (g/mi)	HCHO (g/mi)	CH4 (g/mi)	PM (g/mi)
Tier 3 Bin 30	150K	0.030	1.0	0.010	0.004	0.030	0.003

In addition, this test group also meets the Cold NMHC Family Emission Limit (FEL) of 0.3 g/mi as part of compliance plan to meet corporate fleet average Cold NMHC standards. This test group also meets the SFTP NMOG+NOx Family Emission Limit (FEL) of 0.050 g/mi and CO composite limit of 4.2 g/mi as part of compliance plan to meet corporate fleet average SFTP standards.

The EPA Tier 3 certification and in-use evaporative emission standards applicable to this test group are:

Certification & In-Use Evaporative Standards	Useful Life (mi)	Hot Soak + 2-day diurnal (grams per test)	Hot Soak + 3-day diurnal (grams per test)	Running Loss (g/mi)	ORVR (g/gal)	BETP (grams per test)
T3e	150K	0.400	0.400	0.05	0.20	0.020

The spit back standard is 1.0 gram per test for this test group.

Based on Ford Motor Company's good engineering judgment, all the vehicles described in this Application are designed to comply with the applicable intermediate and full useful life standards, as described above.

This Part I application for certification has been prepared in accordance with the standardized format recommended by EPA via its mail out # CD-14-19 (LDV/LDT/ICI/LIMO), subject: "Certification Application Reporting Guidance", dated November 24, 2014. This Application has also been prepared in accordance with the California Air Resources Board, Final Regulation Order, Amendments to Sections 1960.1, 1960.5, 1961, and 1962 Title 13, California Code of Regulations (As Amended August 4, 2005). Therefore, in accordance with the provisions of 40 CFR 86.1844-01(d)(14) including the provisions of 40 CFR Parts 85, 86 and 600,

Ford requests that a Certificate of Conformity be issued for the LDT test group listed in this Application for Certification.

Please contact Tom Beierschmitt at 313-407-7886 or tbeiers1@ford.com if you have any questions regarding this submission.

Sincerely,

DocuSigned by:

Lawrence H. Merritt, Jr.

DF6ED4749EAC46B...

Lawrence H. Merritt, Jr.
Manager, Emissions Certification
Homologation, & Compliance



Emissions Certification,
Homologation, & Compliance

Allen Park Test Laboratory
1500 Enterprise Drive, Suite 3W200
Allen Park, Michigan 48101- 2053

August 30, 2024

Ms. Robin U. Lang, Chief
Emissions Compliance, Automotive Regulations and Science Division
Air Resources Board
4001 Iowa Ave.
Riverside, CA 92507

Dear Ms. Lang:

Ford Motor Company (Ford) herewith submits its Part I Application for Certification for 2025 model year gasoline powered light-duty trucks (LDTs) contained in Ford's 50 states test group SFMXT02.02Y3 and evaporative emission family SFMXR0125GDF. Tier 3 E10 regular fuel was used for Exhaust and Evaporative emission testing. This test group is counted as LEV III / SULEV30 under the California standards.

The LEV III FTP certification and in-use standards applicable to this test group for vehicles offered in California are as follows:

Certification & In-Use FTP Standards	Useful Life (mi)	NMOG + NOx (g/mi)	CO (g/mi)	HCHO (g/mi)	PM (g/mi)
LEV III SULEV30	150K	0.030	1.0	0.004	0.003

This test group also meets the SFTP NMOG+NOx Family Emission Limit (FEL) of 0.050 g/mi and CO composite limit of 4.2 g/mi as part of compliance plan to meet corporate fleet average SFTP standards.

The LEV III certification and in-use evaporative emission standards applicable to this test group are:

Certification & In-Use Evaporative Standards	Useful Life (mi)	Hot Soak + 2-day diurnal (grams per test)	Hot Soak + 3-day diurnal (grams per test)	Running Loss (g/mi)	ORVR (g/gal)	BETP (grams per test)
L3e	150K	0.400	0.400	0.05	0.20	0.020

The spit back standard is 1.0 gram per test for this test group.

Based on Ford Motor Company's good engineering judgment, all the vehicles described in this Application are designed to comply with the applicable intermediate and full useful life standards, as described above.

This Part I application for certification has been prepared in accordance with the standardized format recommended by EPA via its mail out # CD-14-19 (LDV/LDT/ICI/LIMO), subject: "Certification Application Reporting Guidance", dated November 24, 2014. This Application has also been prepared in accordance with the California Air Resources Board, Final Regulation Order, Amendments to Sections 1960.1, 1960.5, 1961, and 1962 Title 13, California Code of Regulations (As Amended August 4, 2005). Therefore, in accordance with the provisions of 40 CFR 86.1844-01(d)(14) including the provisions of 40 CFR Parts 85, 86 and 600, Ford requests that an Executive Order be issued for the LDT test group listed in this Application for Certification.

Please contact Tom Beierschmitt at 313-407-7886 or tbeiers1@ford.com if you have any questions regarding this submission.

Sincerely

DocuSigned by:

Lawrence H. Merritt, Jr.

DF6ED4749EAC46B...

Lawrence H. Merritt, Jr.

Manager, Emissions Certification
Homologation, & Compliance

Cc: Syed Mustafa
Mohammad Desai



SECTION 15

Other Information

15.00.00.00



CCAPS Manual Payment Request

(North America)

REF NO: 306165

NAME AND ADDRESS OF PAYEE

Environmental Protection Agency-MVECP

U.S. Bank - Government Lockbox 979032

1005 Convention Plaza SL-MO-C2-GL St. Louis, MI 63101

The requestor is responsible to ensure the supplier code has correct company name, remit to and/or banking information whether the payment is going by check or electronically by ACH.

REASON FOR DISBURSEMENT

CERTIFICATION FEES - EPA STANDARD ENGINE FAMILY, EXHAUST EMISSION CONTROL SYSTEM

COMMENTS (Shown on Remittance Advice/Not to include PII)

2025 CERTIFICATION FEES - SFMXT02.53CE, SFMXT02.02JF, SFMXT02.54F1, SFMXT02.02Y3, SFMXT02.03VJY, SFMXT01.52X1, SFMXT02.52P1 (FORMS ATTACHED)

LOC CODE	GEN. LED.	SUB. ACCT.	SUB. DIV.	DEPT	PROD. CODE	BALANCE REFERENCE	MISC. REFERENCE	INVOICE #	INVOICE DATE	AMOUNT (Bracket Credits)	1099 Tax Type
5100	25A	00217		5100S910		F102A	EPA			241,227.00	N
TOTAL										241,227.00	

Pre-requisites for Payment :

- Requestors or Approvers to ensure the following
 - Receipt of Service
 - Price Validation
 - Supported by invoice or other documentation
- Check if payment item is on [Uses of Manual Payment Requests](#)
- For Finance Approval follow [Corporate Approval Authorities - Method of Payment](#)

TYPE OF INVOICE:

MANUAL PAYMENT REQUEST CATEGORY (use drop down with Alt+down arrow key):

Legal Matters - Environmental Fees

Requestor

Operations Approval - Receipt of Service

DocuSigned by:

Preparer/Requestor

CDS ID
TOLIVER

Sign

Date

4/15/2024

Approver

CDS ID
LMERRIT2

Sign

Date

Lawrence H. Merritt, Jr.

DF6ED4749EAC46B...

4/15/2024

Approvals per Corporate Approval Authorities - Method of Payment

Payment Item is on Uses of Manual Payment Requests

Payment Item is not on Uses of Manual Payment Requests

Finance

LL5+
or Plant Controller (LL6)

Unlimited

Finance LL6

< \$250,000

CDS ID
PBLANCAS

Sign

Date

DocuSigned by:

4/15/2024

Patricia Blancas Ruiz

98D37B2D5DA0498...

Finance LL4+
Unlimited

Finance LL5

< \$25,000

CDS ID

Sign

Date

It is important to protect personal data when retaining and forwarding this Payment Authorization Form and attachments, if any.
Every effort must be made to prevent exposure.

The space below may be used for additional local requirements

US EPA Fee Form

[Help and EPA Instructions](#)

* Required Field

General Information

Date: 06/05/2024

Process Code *

Submit New Fee Filing Form

Manufacturer Code *

FMX

Manufacturer Name *

Ford Motor Company

Contact Name *

Tina Oliver

Contact Email Address *

toliver@ford.com

Contact Phone *

313-323-8938

Calendar Year complete application submitted to EPA *

2024

PLEASE NOTE: These fees apply to complete certification applications received by EPA from January 1, 2024, through December 31, 2024. The applicable fee is determined by the calendar year in which the complete certification application is received, not the model year.

Engine Family / Evaporative Family / Test Group *

SFMXT02.02Y3

Certificate Request Type (Industry Sector Code)

Certificate Request Type *

- ☒ On-Highway LDV, LTD, MDVPV, HDV Chassis Cert (Federal) (A, B, D, J, T, V)
- ☐ On-Highway HDE Dyno Cert (Federal) (E, H)
- ☐ On-Highway LD ICI, MDPV ICI, HDV ICI (A, B, D, J, T, V)
- ☐ On-Highway Motorcycle (C)
- ☐ On-Highway HDV Evap (F)
- ☐ On-Highway LDV, LTD, MDVPV, HDV Chassis Cert (California-Only) (A, B, D, J, T, V)
- ☐ On-Highway HDE Dyno Cert (California-Only) (E, H)
- ☐ Nonroad CI (L)
- ☐ Nonroad SI (B, S)
- ☐ Locomotive (G, K)
- ☐ All Nonroad Recreational, excluding Marine engines (X, Y)
- ☐ All Marine (Including IMO) (M, N, W)
- ☐ Component Certification for Evaporative Emissions (P)

IMO Name (Required for dual US/IMO Marine Only)

ICI VIN Number (Required for ICIs Only)

Do you qualify for a Reduced Fee? *

No

Payment Information

Amount Owed

\$34,461.00

Payment Type *

Offline ACH

Comments

Pay.gov Tracking ID: 27F1QPVR

Cert Engineer: Tom Beierschmitt, 313-407-7886, tbeiers1@ford.com, CDSID: tbeiers1

EPA Form Number 3520-29

OMB Control No. 2060-0545

Approval expires 12/31/2022

The public reporting and recordkeeping burden for this collection of information is estimated to average 12 minutes per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.

The content of this document may contain Sensitive But Unclassified (SBU) data and/or Controlled Unclassified Information (CUI).



SECTION 16

Confidential Information



SECTION 17

California ARB Requirements

17.00.00.00

FoMoCo

Ford Motor Company
VEHICLE EMISSION CONTROL INFORMATION

Conforms to regulations: 2025 MY

U.S. EPA: T3B30 LDT2

CA OBD II

Fuel: Gasoline

California: SULEV30 LDT

CA OBD II

Fuel: Gasoline

TWC/HO2S/WR-HO2S/CAC/TC/DFI/SFI/EGR/EGRC

No adjustments needed.

2.0L-Group: SFMXT02.02Y3 Evap: SFMXR0125GDF

▽SW7E-9C485-K P J





SECTION 18

Revisions

18.00.00.00

2025 APPLICATION REVISIONS

SFMXT02.02Y3

NO.	DATE	PAGE(S)	DESCRIPTION
1	11/8/2024	12.00.02.00 12.00.03.00 12.00.06.00 16.00.05.00	2Y3-001 – This running change introduces new R07 calibrations containing engine control strategy, engine calibration, engine OBD, transmission calibration, and transmission OBD changes to support mass production. No testing conducted. White paper: 03.14.01-14167
2	12/18/2024	12.00.03.00	Corrected exhaust emissions parts list for completeness and accuracy.

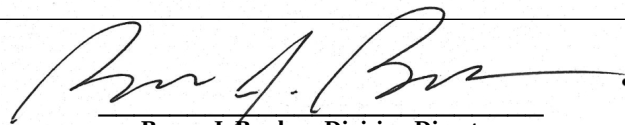


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2025 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT

OFFICE OF TRANSPORTATION
AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: Ford Motor Company
(U.S. Manufacturer or Importer)
Certificate Number: SFMXT02.02Y3-027

Effective Date:
10/03/2024
Expiration Date:
12/31/2025


Byron J. Bunker, Division Director
Compliance Division

Issue Date:
10/03/2024
Revision Date:
N/A

Test Group Name: SFMXT02.02Y3
Evaporative/Refueling Family Name: SFMXR0125GDF
Applicable Exhaust Emission Standards: Federal Tier 3 Bin 30
Applicable Evaporative/Refueling Standards: Federal Tier 3 Evap

Engine Displacement: 2.0 Liters
Exhaust Emission Test Fuel Type: Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Full Useful Life Miles: Exhaust Emissions: 150,000 miles
Full Useful Life Miles: Evaporative/Refueling Emissions: 150,000 miles

Models Covered: Ford: BRONCO SPORT 4WD, MAVERICK AWD, MAVERICK LOBO AWD, MAVERICK TREMOR AWD

Pursuant to section 206 of the Clean Air Act (42 U.S.C.7525) and 40 CFR Parts 85, 86, 88, 600, 1037, 1065, and 1066 as applicable, this certificate of conformity is hereby issued with respect to test vehicles which have been found to conform to the requirements of the regulations on Control of Air Pollution from New Motor Vehicles and New Motor Vehicle Engines (40 CFR Parts 85, 86, 88, 600, 1037, 1065, and 1066 as applicable) and which represent the new motor vehicle models listed above by test group and evaporative/refueling emission family, more fully described in the application of the above named manufacturer. Vehicles covered by this certificate have demonstrated compliance with the applicable emission standards as more fully described in the manufacturer's application. This certificate covers the above models, which are designed to meet the applicable emission standards specified in 40 CFR Parts 85, 86, 88, 600, 1037, 1065, and 1066 as applicable at both high and low altitude as applicable.

EPA is issuing this certificate subject to the conditions and provisions of 40 CFR 86.1848(c), and 40 CFR 1037 as applicable.

This certificate covers only those new motor vehicles or vehicle engines which conform, in all material respects, to the design specifications that apply to those vehicles or engines described in the documentation required by 40 CFR Parts 85, 86, 88, 600, 1037, 1065, and 1066 as applicable and which are produced during the 2025 model year production period stated on this certificate of the said manufacturer, as defined in 40 CFR Parts 85, 86, 88, 600, 1037, 1065, and 1066 as applicable. The manufacturer shall obtain the approval of the California Air Resources Board (in the form of an executive order issued by the California Air Resources Board) prior to introducing any vehicle covered by this certificate into commerce 1) in the State of California, or 2) in a State that, under the authority of Section 177 of the Clean Air Act, has adopted and placed into effect the California standards to which this test group has been certified.

Catalyst-equipped vehicles designed to be operated on gasoline or flexible fuel are equipped with an emission control device which the Administrator has determined will be significantly impaired by the use of leaded fuel. This certificate is issued subject to the conditions specified in 40 CFR 80.24. Catalyst-equipped vehicles designed to be operated on gasoline or flexible fuel, otherwise covered by this certificate, which are driven outside the United States, Canada, Mexico, Japan, Australia, Taiwan and the Bahama Islands will be presumed to have been operated on leaded fuel resulting in deactivation of the catalysts. If these vehicles are imported or offered for importation without retrofit of the catalyst, they will be considered not to be within the coverage of this certificate unless included in a catalyst control program operated by manufacturer or a United States Government Agency and approved by the Administrator.

In the case of completely assembled vehicles, this certificate of conformity covers only vehicles which are completely manufactured prior to January 1, 2026. Normally incompletely assembled vehicles (such as cab chassis) may be completed after this date, provided that the basic manufacturing (including installation of the emission control system) was completed prior to January 1, 2026. This certificate does not cover vehicles sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.

 CALIFORNIA AIR RESOURCES BOARD	FORD MOTOR COMPANY	Executive Order: A-010-2570 New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles Page 1 of 4
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Pursuant to the authority vested in California Air Resources Board by Health and Safety Code (HSC), Division 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by HSC Sections 39515 and 39516 and Executive Order G-19-095;

IT IS ORDERED AND RESOLVED: That the following exhaust and evaporative emission control systems produced by the manufacturer are certified as described below. Production vehicles shall be in all material respects the same as those for which certification is granted.

TEST GROUP INFORMATION										
MODEL YEAR		TEST GROUP		VEHICLE CLASS(ES)			FUEL CATEGORY		FUEL TYPE	
2025		SFMXT02.02Y3		LDT2			DEDICATED SINGLE FUEL VEHICLE		GASOLINE	
USEFUL LIFE (miles)				VEHICLE EMISSION CATEGORY				INTERIM / INTERMEDIATE IN-USE STD		
EXH/ORVR		EVAP		FTP		SFTP		FTP		SFTP
150000		150000		LEV3 SULEV30		LEV3 COMPOSITE		*		*
SPECIAL FEATURES & EXHAUST EMISSION CONTROL SYSTEMS						OBD STATUS			ENGINE DISPLACEMENT (L)	
1	TWC(2) , HO2S, WR-HO2S, CAC, TC, DFI, SFI, EGR, EGRC					FULL		*		2.0
*	*					PARTIAL		ALL MODELS		
*	*					PARTIAL WITH FINES		*		
EVAPORATIVE & REFUELING (EVAP/ORVR) FAMILY INFORMATION										
EVAP / ORVR FAMILY			EVAPORATIVE STD CATEGORY			EVAP EMISSION STD VEHICLE CLASS			SPECIAL FEATURES	
SFMXR0125GDF			LEV 3 OPTION2 WITH FEL			LDT2			HCT	
EMISSION CREDIT INFORMATION										
NMOG+NOX FLEET AVE. CREDIT FOR EXTENDED WARRANTY			NMOG CREDIT FOR NON-PZEV ZERO-EVAP			NMOG CREDIT FOR DOR			OPTIONAL EXH. STD FOR WORK TRUCKS	
N			N			N			N	
NMOG AND FLEET AVERAGE INFORMATION										
NMOG RAF	CH4 RAF	FTP NMOG/NMHC RATIO	HCHO/NMHC RATIO	NMOG+NOX FLEET STD PC+LDT (0-3750 LVW) (g/mi)		NMOG+NOX FLEET STD LDT (3751 LVW-8500 GVWR) + MDPV (g/mi)		NMOG+NOX FLEET STD MDV (10,001-14,000 GVWR) (g/mi)		
*	*	1.10	*	*		*		*		

See the Attachment for Vehicle Models, Evaporative Family, Engine Displacement, Emission Control Systems, Phase-In Standards, OBD Compliance, Emission Standards and Certification Levels, and Abbreviations. (As applicable, heavy-duty vehicles (HDV) over 14,000 pounds in GVWR listed in this Executive Order are certified to the requirements in 13 CCR Section 1961.2 applicable to MDV pursuant to 13 CCR Section 1956.8(c)(3) or 13 CCR Section 1956.8(h)(5), as applicable.)

 CALIFORNIA AIR RESOURCES BOARD	FORD MOTOR COMPANY	Executive Order: A-010-2570 New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles Page 2 of 4
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BE IT FURTHER RESOLVED:

The exhaust and evaporative emission standards and the certification emission levels for the listed vehicles are as listed on the Attachment. Compliance with the 50° Fahrenheit testing requirement may have been met based on the manufacturer's submitted compliance plan in lieu of testing. Any debit in the manufacturer's fleet average compliance requirement for NMOG+NOx or Vehicle Equivalent Credit (13 CCR Sections 1961.2(b)(1), 1961.2(b)(3), or 1961.2(c)(3), and the incorporated test procedures, as applicable), or Greenhouse Gas Emissions (13 CCR Section 1961.3, or 17 CCR Section 95663, and the incorporated test procedures, as applicable), for PC, LDT, MDPV or MDV shall be equalized as required.

BE IT FURTHER RESOLVED:

For the listed vehicle models, the manufacturer has attested to compliance with Title 13, California Code of Regulations, (13 CCR) Sections 1965 [emission control labels], 1968.2 [on-board diagnostic, full or partial compliance], 2035 et seq. [emission control warranty], 2235 [fuel tank fill pipes and openings] (gasoline and alcohol fueled vehicles only), and "High-Altitude Requirements" and "Inspection and Maintenance Emission Standards" (California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for PC, LDT and MDV).

Vehicles certified under this Executive Order shall conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this Executive Order.

Executed on this 5th day of November 2024.



Robin U. Lang, Chief
 Emissions Certification and Compliance Division

ATTACHMENT

EXHAUST AND EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS (FTP, HWFET, 50°F, 20°F)

	FUEL TYPE	CH4: methane; NMOG: non-CH4 organic gas; HC: hydrocarbon; NMHC: non-CH4 HC; CO: carbon monoxide; NOx: oxides of nitrogen; HCHO: formaldehyde; PM: particulate matter; RAF: reactivity adjustment factor; 2DHS/3DHS [g HC/test]: 2/3 days diurnal+hot-soak; RL [g HC/mi]: running loss; ORVR [g HC/gallon dispensed]: on-board refueling vapor recovery; g: gram; mg: milligram; mi: mile; K: 1000 miles; F: degrees Fahrenheit; FTP: federal test procedure; SFTP: supplemental FTP									
		NMOG+NOx (g/mi)		CO (g/mi)		NOx (g/mi)		HCHO (mg/mi)		PM (g/mi)	
		CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
FTP@50K	*	*	*	*	*	*	*	*	*	*	*
FTP@UL	GASOLINE-TIER3 E10	0.016	0.030	0.4	1.0	*	*	0.1	4	0.0002	0.003
50°F @4K	*	*	*	*	*	*	*	*	*		

	FUEL TYPE	NMOG+NOx (g/mi)		CO (g/mi)	
		CERT	STD	CERT	STD
HWFET @ 50K	*	*	*		
HWFET @ UL	GASOLINE-TIER3 E10	0.001	0.030		
20°F @ 50K	COLD CO E10 REGULAR GASOLINE (TIER3)			1.2	12.5

SFTP EXHAUST EMISSION STANDARDS AND CERTIFICATION LEVELS

	FUEL TYPE		US06			SC03		COMPOSITE		
			NMOG+NOx (g/mi)	CO (g/mi)	PM (mg/mi)	NMOG+NOx (g/mi)	CO (g/mi)	NMOG+NOx (g/mi)	CO (g/mi)	PM (mg/mi)
@ 4K	*	CERT	*	*		*	*			
		STD	*	*		*	*			
@ UL	GASOLINE-TIER3 E10	CERT	*	*	0.2	*	*	0.029	0.6	*
		STD	*	*	6	*	*	0.050	4.2	*
		BIN						0.050		

WHOLE VEHICLE EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

EVAPORATIVE FAMILY	FUEL TYPE	WHOLE VEHICLE EVAPORATIVE TESTING						RL (g/mi) @ UL	
		3DHS (g/test) @ UL			2DHS (g/test) @ UL				
		CERT	STD	FEL	CERT	STD	FEL	CERT	STD
SFMXR0125GDF	GASOLINE-TIER3 E10	0.293	0.400	0.400	0.352	0.400	0.400	0.00	0.05

ORVR / FUEL ONLY / CANISTER BLEED EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

EVAPORATIVE FAMILY	ORVR (g/gallon) @ UL			FUEL ONLY EVAP & CANISTER BLEED						
				FUEL TYPE	3DHS RIG TEST (g/test) @ UL		2DHS RIG TEST (g/test) @ UL		BLEED CANISTER TEST (g/test) @ 4K	
	FUEL TYPE	CERT	STD			CERT	STD	CERT	STD	CERT
SFMXR0125GDF	GASOLINE-TIER3 E10 (10RVP)	0.02	0.20	GASOLINE-TIER3 E10	*	*	*	*	0.004	0.020

 CALIFORNIA AIR RESOURCES BOARD	FORD MOTOR COMPANY	Executive Order: A-010-2570 New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles Page 4 of 4
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EFFECTIVE LEAK DIAMETER STANDARD AND CERTIFICATION LEVEL (INCHES)

EVAPORATIVE FAMILY	LEAK FAMILY	CERT	STD
SFMXR0125GDF	SFMXR0125GDF-001	*	0.02

*: not applicable; #: pounds; UL: useful life; PC: passenger car; LDT: light-duty truck; LDT1: LDT<6000#GVWR,0-3750#LVW; LDT2: LDT<6000#GVWR,3751-5750#LVW; LDT3: LDT 6001-8500#GVWR,3751-5750#ALVW; LDT4: LDT 6001-8500#GVWR,5751-8500#ALVW; MDV: medium-duty vehicle; MDV4: MDV 8501-10000#GVWR; MDV5: MDV 10001-14000#GVWR; MDPV: medium-duty passenger vehicle; HDV: heavy-duty vehicle; ECS: emission control system; CERT: certification; STD: standard; FEL: family emission limit; GVWR: gross vehicle weight rating; LVW: loaded vehicle weight; ALVW: adjusted LVW; LEV: low emission vehicle; ULEV: ultra LEV; SULEV: super ULEV; ZEV: zero-emission vehicle; TZE: transitional ZEV; TWC/OC: 3-way/oxidizing catalyst; ADSTWC: adsorbing TWC; HAC: HC adsorbing catalyst; WU: warm-up catalyst; NAC: NOx adsorption catalyst; SCR-U or SCRC/SCR-N or SCRC-NH3: selective catalytic reduction-urea/ammonia; NH3OC: ammonia oxidation catalyst; CTOX/PTOX: continuous/periodic trap oxidizer; DPF: diesel particulate filter (active); GPF: PM filter for spark-ignited engine; cGPF (coated gasoline particulate filter); HO2S/O2S: heated/oxygen sensor; WR-HO2S or AFS: wide range/linear/heated air-fuel ratio sensor; NOXS: NOx sensor; PMS: PM sensor; RDQS: reductant quality sensor; NH3S: ammonia sensor; EGR: exhaust gas recirculation; HP/LP EGR: High/Low Pressure EGR; EGRC: EGR cooler; AIR/AIRE: secondary air injection (belt driven)/(electric driven); PAIR: pulsed AIR; SFI/MFI: sequential/multiport fuel injection; DFI/IFI: direct/indirect fuel injection; TC/SC: turbo/super charger; CAC: charge air cooler; FFH: fuel fired heater; F/P/\$: full/partial/partial with fines on-board diagnostic; DOR: direct ozone reducing; HCT: hydrocarbon trap; BCAN: bleed carbon canister; prefix 2: parallel; (2) suffix: series; a hyphen (-) between after treatment ECS indicates multiple functionalities of the after treatment device (ex. DPF-SCRC: SCR coated DPF); CNG/LNG: compressed/liquefied natural gas; LPG: liquefied petroleum gas; E85: "85%" ethanol ("15%" gasoline) fuel; E10: "10%" ethanol ("90%" gasoline) fuel; A: automatic (with lockup); M: manual transmission; SA: semi-automatic transmission; CV: continuously variable transmission; SCV: selectable continuously variable transmission; AM: automated manual transmission; AMS: automated manual-selectable transmission; OT: other transmission; AER: all-electric range; EAER: equivalent AER; PHEV: plug-in hybrid electric vehicle; NMOG + NOx Fleet Ave. Credit for Extended Warranty: N = no credits, Y = credits, S = credits for some/select models

2025 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD
FORD	BRONCO SPORT	LDT2	2.0	SA8	SFMXR0125GDF	1	P
FORD	MAVERICK	LDT2	2.0	A8	SFMXR0125GDF	1	P
FORD	MAVERICK LOBO	LDT2	2.0	SA8	SFMXR0125GDF	1	P
FORD	MAVERICK TREMOR	LDT2	2.0	SA8	SFMXR0125GDF	1	P

Application for Certification

Part 2



**Emissions Certification,
Homologation, & Compliance**

**Allen Park Test Laboratory
1500 Enterprise Drive, Suite 3W-200
Allen Park, Michigan 48101-2053**

November 8, 2024

Mr. Tristin Rojeck
Certification Division
Mobile Source Pollution Control
U. S. Environmental Protection Agency
2000 Traverwood Drive
Ann Arbor, Michigan 48105

Dear Mr. Rojeck:

Ford Motor Company is hereby notifying the EPA of our intention to introduce into production 2025 Running Change 2Y3-001 (SFMXT02.02Y3 Test Group), under the provisions of 40 CFR 86.1842-01, "Addition of a vehicle after certification; and changes to a vehicle covered by certification".

Running Change 2Y3-001 introduces the following Ford Bronco Sport, Ford Maverick, Ford Maverick Tremor, and Ford Maverick Lobo 2.0L GTPFDI calibration revisions:

Vehicle	New Calibrations	Cert Codes
Ford Bronco Sport 2.0L GTPFDI	SCHDE3NA07 SCHDE3SA07	SCHDE3NA0004 SCHDE3SA0004
Ford Maverick & Ford Maverick Tremor 2.0L GTPFDI	SCFEE3NF07 SCFEE3SF07	SCFEE3NF0004 SCFEE3SF0004
Ford Maverick Lobo 2.0L GTPFDI	SCFEE3NM07 SCFEE3SM07	SCFEE3NM0004 SCFEE3SM0004

These calibration revisions contain the following changes to the Engine Control Strategy, Engine Calibration, Engine OBD, Transmission Calibration, and Transmission OBD:

Engine Control Strategy –

- Strategy Update to CWCMB1/CWCMB & CRWM1/CRWMB from CWCJ0/CWCJA & CRWJ0/CRWJA
- FSSLD
 - URD 95480 - Robustness Improvements within Vitesco LLD to resolve false P060B / P060A_75 codes.
- FHLDS
 - URD 95623 - CLIC - Incorrect Opening Delay during Intrusive Learning resulting in injector performance codes.

Engine Calibration –

- PT Cooling (Maverick/Maverick Lobo/Maverick Tremor only)
 - Commonized the PTU (Power Transfer Unit) cooling calibration between all variants to reduce calibration complexity. The ATWU (Active Transmission Warm Up) valve is commanded open when the PTU temperature is reported high in order to provide coolant flow to the transmission oil cooler and PTU cooler (on applicable variants). This action is now taken on all variants where previously it was only taken on variants with a PTU cooler installed (Tremor).

- Driveability
 - Tip-in: Improved response delay to meet AVL metrics
 - Dashpot: Reduced run-on feel when driver tips out in 4th gear to meet time to zero acceleration metrics
- CSSRE
 - Decreased minimum spark clips in Neutral/Drive from -20 to -30deg to achieve CSER spark targets
- Air Charge
 - Improved air charge and fueling accuracy by changing the C mul (critical point) to 1 at low engine speeds at these HDFX indices. These changes improve the transient air flow estimations related to the push-back modeling, while not adversely impacting the steady-state air charge calibration accuracy. If the air charge model doesn't match actual engine behavior poor combustion and vehicle hesitations may occur.
- DI_Fuel
 - Populated new parameters for the revised injector air limit logic. The new injector air limit "safety factor" is calibrated as carryover functionality
- Purge
 - Changed the Multiplier to purge percent fuel limit based on changes in load. Calibrated to shut purge off when there is significant drop in load (load delta < -0.2) due to a tip out. Change is to help reduce tip out bump attributed to purge during hot ambient high vapor conditions which occurred during the July 2024 Las Vegas PVP Drive. Loaded canister tests were ran in APTL and showed no impact to emissions or purge capability.
- ETC Monitor
 - U0103_48 - Updated Transmission IPC GSM communication fault times to add robustness against premature fault detections due to the GSM commanding and recovering from a module reset event.
 - (Maverick/Maverick Tremor/Maverick Lobo Only) - The driveline systems for FWD products (i.e. - 8Fxx transmission variants) are QM-rated, therefore the DLCM (if there is one) would not be expected to communicate an ASIL-rated torque reduction message (via 0x20C).(Coordinated with transmission OBD)

Engine OBD –

- Comprehensive Component Monitor
 - P051B / P051A_92 (Crankcase Pressure Sensor "A" Circuit Range/Performance) - ICA for CKCT Stuck Test to avoid false detections due to SW issue.
 - Reduced failure threshold from 0.5 to 0.25°C.
 - Increased minimum load to increment stabilization timer from 0.4 to 0.8.
 - Increased minimum engine speed to increment stabilization timer from 1400 to 1600 rpm.
 - Increased minimum stabilization timer to make a call from 60 to 150s.
 - P2C39 / P2C38_92 (Cylinder Head Temperature Sensor "B" Range/Performance) - ICA to avoid false detections due to SW issue.
 - Reduced failure thresholds for CHT2 Stuck Test #1 from 1 to -100°C to disable detection capability on drives with ECT at start below 1°C.
 - P0521 / P0520_23 & P0520_2A (Engine Oil Pressure Sensor/Switch "A" - Stuck Low / Stuck In Range) - Corrected calibration direction per SME.
 - Turned off P0520_23 and set P0520_2A to MIL.
 - (Bronco Sport Only) - P25B1 / P2065_2A (Fuel Level Sensor "B" Stuck)
 - Increased minimum filtered fuel level to enable sender B movement test from 0.3 to 0.45 to avoid false detections when the usable fuel in the passive side is consumed.
- CSER Monitor
 - P2FCF_92 (Catalyst Temperature Control Performance) - Robustness improvements for Catalyst Reheating Monitor.
 - Reduced the maximum time to make a call from 60,000 to 1000s.
 - Increased the minimum CSER torque reserve to enable the monitor from 0 to 5 Nm.

- P0120_B5 (Throttle/Pedal Position Sensor "A" - CSER) - Turned off diagnostic as it is not required.
- P2100_B5 (Throttle Actuator "A" Control Motor Control - CSER) - Turned off diagnostic as it is not required.
- Coolant Monitor
 - P0128 / P0128_00 (Coolant Thermostat - Coolant Temp Below Thermostat Regulating Temperature) - Fine tuning to the inferred ECT to improve robustness against false detections.
- EGO Monitor
 - P0137 & P0138 / P0136_11, P0136_12 & P0136_13 (O2 Sensor Circuit Low Voltage / High Voltage / Open - Bank 1 Sensor 2) - FEL updates.
 - Increased the maximum CMS tip temperature to infer the sensor is warm enough on the following trip start after a circuit fault was detected on the previous trip from 937.65 to 1016.30°F to align with base heater control sensor protection.
 - Increased CMS upper voltage band to run open circuit diagnostics from 2.3 to 2.45V to accommodate all CMS types for the new ATIC342 ASIC (backwards compatible with ATIC142).
 - Increased CMS voltage threshold to declare an overvoltage condition from 2.3 to 2.45V to accommodate all CMS types for the new ATIC342 ASIC (backwards compatible with ATIC142).
 - P0133 / P0130_7C (O2 Sensor Circuit Slow Response Bank 1 Sensor 1) - Turned off as it is not applicable for DB6P (DFS0 based 6-Pattern).
- EGR Monitor
 - P0402 / P0400_92 (EGR "A" Flow - Performance or Incorrect Operation) - Changes to reduce the amount of time it takes to run Excess Flow at No Flow diagnostics to reduce CO faulted emissions.
- Evaporative System Monitor
 - P0456 / P0456_00 (EVAP System Leak Detected - very small leak) - Adjusted EONV positive pressure thresholds to improve robustness against false detections.

Transmission Calibration –

- Ratio Manager
 - Lowered WOT upshifts to 6000rpm, except in LOBO Mode– not on cycle
 - (Maverick Lobo only) - Enabled SST Auto upshifts in LOBO Mode to prevent overspeeding engine – not on cycle
 - (Maverick Lobo only) - PPH (Prevent Powertrain Hunting) changes common with base P758 – not on cycle
 - (Maverick Lobo only) - Reverted WOT 3-1 kickdowns in LOBO back to R05 values – no risk to overspeed due to ALT character fast upshifts - not on cycle
- Upshifts
 - (Maverick Lobo only) - Limit usage of alternate shift character in SST and Live-in-Drive to only Sport and LOBO modes, all other drive modes use base shift character in SST or LID. This was based on feedback from the VPSE PVP drive event.
 - (Maverick Lobo only) - Predictive display (Fast Tach) tuning changes to slow/delay visual digital bar style tach response in alternate shift character drive modes (SST, LID, and LOBO). This was in response to feedback from PVP and program management drives indicating the previous calibration felt to disconnected from actual engine speed.
 - Alternate shift character shift feel (pressure control and TQMOD tuning) changes to reduce upshift event harshness in response to program, VPSE PVP drives and on-track program management drive evaluations. (Changes only apply to LOBO mode and do not affect Cx430 or P758 Base program though they show up as changes in them)

- Downshifts
 - Decrease offgoing endramp time and increase oncoming endramp time at low torques to provide more overlap to block Power Off to Power On transitions during 4-3 coastdown step ins.
 - Extend percent shift complete trigger to block Tip In torque management from running and conflicting with torque surge logic on a 4-3 step in.
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 - Increase in allowable torque max ramp clip during step in exit from a Zero Input Power event.
- Engagements
 - Acceleration clips applied that filter out unrealistic values, to reduce random, harsh events
- Transmission Functional/Electrical/TEAM:
 - Increased time from 200 mSec to 600 mSec for TEAM fault 252 (TSS fault disabled ratio based diagnostics).

Transmission OBD –

- U0103_48 /U101E - Updated Transmission IPC GSM communication fault times to add robustness against premature fault detections due to the GSM commanding and recovering from a module reset event.
 - Engine side cal: ipcex_tm_fmem_max_01_v[18] = 1650 (from 800); ipcex_tm_fmem_max_01_v[19] = 1650 (from 800)

This running change is transparent for fuel economy, and tailpipe and evaporative emissions performance, based on development data and engineering analysis. Additionally, there is no impact to OBD self-certification. Therefore, certification testing was not conducted.

As allowed under 86.1842-01 (b)(ii), Ford has determined that the above addition or change does not cause noncompliance based on an engineering evaluation of the addition or change and/or testing.

Please contact Tom Beierschmitt at (313-407-7886) or tbeiers1@ford.com if you have any questions regarding this submittal.

Sincerely,

DocuSigned by:
Wade Witte
223D2C0DF78F423...

Wade Witte
Supervisor
Light Duty Certification & Homologation



**Emissions Certification,
Homologation, & Compliance**

**Allen Park Test Laboratory
1500 Enterprise Drive, Suite 3W-200
Allen Park, Michigan 48101-2053**

November 8, 2024

Ms. Robin U. Lang, Chief
Emissions Compliance, Automotive Regulations and Science Division
Air Resources Board
4001 Iowa Ave.
Riverside, CA 92507

Dear Ms. Lang:

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Sincerely,

DocuSigned by:
Wade Witte
223D2C0DF78F423...
Wade Witte
Supervisor
Light Duty Certification & Homologation

Cc: S. Mustafa, M. Desai