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	MSF250262
Invoice Date	Sep 16, 2025

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	26_CBI_TFMXT03.57AT_APP	Model Year 2026	TFMXT03.57AT	Light-duty vehicle test group and medium-duty vehicle test group	Base	$ 48,447.00
2	26_CBI_TFMXT03.51F1_APP	Model Year 2026	TFMXT03.51F1	Light-duty vehicle test group and medium-duty vehicle test group	Base	$ 48,447.00
3	26_CBI_TFMXT02.72V6_APP	Model Year 2026	TFMXT02.72V6	Light-duty vehicle test group and medium-duty vehicle test group	Base	$ 48,447.00
4	OPCARRYOVER_26_CBI_TF	Model Year 2026	TFMXT02.31EM	Light-duty vehicle test group and medium-duty vehicle test group	Partial Carry-Over	$ 24,224.00
5	26_CBI_TFMXT03.03V7_APP	Model Year 2026	TFMXT03.03V7	Light-duty vehicle test group and medium-duty vehicle test group	Base	$ 48,447.00
6	26_CBI_TFMXT02.71HS_APP	Model Year 2026	TFMXT02.71HS	Light-duty vehicle test group and medium-duty vehicle test group	Base	$ 48,447.00
7	OPCARRYOVER_26_CBI_TF	Model Year 2026	TFMXT02.36HG	Light-duty vehicle test group and medium-duty vehicle test group	Partial Carry-Over	$ 24,224.00

Total Due	$ 290,683.00

I, [redacted] , attest that any information provided is true, accurate, and complete.

(Responsible Party Signature Here)

Application for Certification

Part 1

FORD MOTOR COMPANY
APPLICATION FOR CERTIFICATION - PART 1

2026 Model Year

Test Group:	TFMXT03.03V7
Durability Group:	TFMXGPGNND4A
Evap. Families:	TFMXR0140NDG Bronco Raptor TFMXR0140NDV Ranger Raptor
Test Group Description:	3.0L GTDI V-6
Durability Group Description:	Four Stroke, Otto Cycle, Gasoline Fueled, Turbocharged, Direct Injection, Catalyst Code D
Applicable Standards:	Federal Exhaust - LDT4, T3B50 Federal Evap – LDT4, Tier 3 California Evap - LEV-III California Exhaust- LDT, L3ULEV50 CH_4 - 0.030 g/mi Federal Cold NMHC - 0.4 g/mi Federal Particulate Matter - 0.003 g/mi N_2O - 0.010 g/mi SFTP - NMOG+Nox Composite FEL 0.090 g/mi
Carlines Covered:	**28** BRONCO RAPTOR 4WD 178 RANGER RAPTOR 4WD

Vehicles Tested

Exhaust Emission Vehicle:	
NG11-3.0-J-509/Config 0	
FTP (E10) TN	NFMX10073249
HWY (E10) TN	NFMX10073256
US06 (E10) TN	NFMX10073250
SC03 (E10) TN	NFMX10073255
Cold CO (E10) TN	NFMX10073254
50F NMOG (E10) TN	NFMX10073251

Evaporative Emission Vehicle:	
RRD1-3.0-J-731/Config 0 (TFMXR0140NDV)	
2Day TN	RFMX10079453
3Day TN	RFMX10079533
Linking TN	RFMX10079452
ORVR	RFMX10079535
RL TN	RFMX10079534
MG11-2.3-J-203/Config 0 (TFMXR0140NDG)	
2Day TN	MFMX10067811
3Day TN	MFMX10068292
Linking TN	MFMX10067778
ORVR	MFMX10067812
RL TN	MFMX10067818
301W321/Config 0 (TFMXR0140NDG)	
BETP	NFMX10071316
318W879/Config 0 (TFMXR0140NDV)	
BETP	RFMX10079536

Release Date: February 20, 2026

For Questions, Contact:

Hachem, Nabil, nhachem1@ford.com (1-313-6187783)

Part 1 Application Index

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

03.00.01.00 Evaporative Family and Calibration Parameters

Evaporative Family Name: TFMXR0140NDV

2026 MY 3.0L GTDI Ranger Raptor

Emission Component		Sensed Parameter	Controlled Parameter	Justification	Calibration Specification
Fuel Filler Pipe Assembly with Capless Insert MB3G-9032-HE		None	Fuel Tank Vapor, Liquid Fuel Flow, Vapor Recirculation	Operates in EVAP and/or ORVR	Recirc. Orifice Diameter: 2.75 mm
Fuel Limiting Vent Valve KB3G-9B190-AA		Fuel Tank Vapor	Fuel Tank Vapor	Operates in EVAP and/or ORVR	FLVV Main Orifice Diameter: 9.14 mm FLVV Bypass: 1.25 mm
Grade Vent Valve MB3G-9B593-VA (two per tank)		Fuel Tank Vapor	Fuel Tank Vapor	Operates in EVAP	Main Orifice: 4.0 mm Bleed: 0.3 mm
Fuel Tank Pressure Sensor 9U5A-9C052-BC		Fuel Tank Pressure	None	Operates in FTP	
Carbon Canister MU5A-9D653-P1B		None	Fuel Vapor	Operates in EVAP and/or ORVR	140g BWC 2.2L Total Volume (includes 0.066L Bleed Element)
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	

03.00.01.00 Evaporative Family and Calibration Parameters

Evaporative Family Name: TFMXR0140NDG

2026 MY 3.0L GTDI Bronco Raptor

Emission Component		Sensed Parameter	Controlled Parameter	Justification	Calibration Specification
Capless Refueling Component Insert MU5A-9D000-AC		None	Fuel Tank Vapor	Operates in EVAP and/or ORVR	
Vapor Hose with ORVR Recirculation Orifice MB3G-9C015-RE		None	Vapor Recirculation	Operates in ORVR	Recirc. Orifice Diameter: 2.5 mm
Fuel Limiting Vent Valve 9L14-9B190-EA		Fuel Tank Vapor	Fuel Tank Vapor	Operates in EVAP and/or ORVR	FLVV Main Orifice Diameter: 9.14 mm FLVV Bypass:1.25 mm
Grade Vent Valve MB3G-9B593-PB (two per tank)		Fuel Tank Vapor	Fuel Tank Vapor	Operates in EVAP	Main Orifice: 4.0 mm Bleed: 1.0 mm
Fuel Tank Pressure Sensor 9U5A-9C052-BC		Fuel Tank Pressure	None	Operates in FTP	
Carbon Canister MB3G-9D653-AC		None	Fuel Vapor	Operates in EVAP and/or ORVR	140g BWC 2.3L Total Volume (includes 0.065L Bleed Element)
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	

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	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG
Certificate Number	--	**CARB Executive Order #**	--
Certificate Issue Date	--	**Certificate Revision Date**	--
Certificate Effective Date	--	**Conditional Certificate**	--
CSI Revision #	--	**CSI Submission/Revision Date**	11/03/2025 08:33:52 AM
Model Year	2026		

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 fuel 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**	LDT4
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	TFMXGPGNND4A	**Durability Group Equivalency Factor**	1.0
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**	TFMXT03.0JPC
Test Group OBD Compliance Level	Partial - with deficiencies and penalty	**Number of Test Group OBD Deficiencies**	3
OBD Deficiencies Comments	--		
Mfr Test Group Comments	E10 City Litmus Value = 13.6 mpg, City Litmus Threshold = 13.2 mpg, E10 HWY Litmus Value = 15.0 mpg, HWY Litmus Threshold = 15.3 mpg.		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG

Evaporative/Refueling Family Information

Evaporative Summary Information Type	Update for Correction	**Submission/Correction Date**	09/18/2025 02:05:24 PM
Integrated ORVR?	Yes	**Fuel(s)**	Gasoline
Multiple Fuel Storage	--		
Bladder Fuel Tank?	No		
Fuel Tank Material	Other	**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**	AIS Hydrocarbon Trap
Fuel System Vapor Storage Canister?	Yes	**Other Vapor Storage**	See comments below
Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)	140	**Number of Primary Canisters**	1
Number of Bleed Canisters	1	**Bleed Canister Total Working Capacity (grams)**	1
Mfr Evaporative/Refueling Family Comments	1 X 2.2L HA 3-port Rect. + 1 X 0.065L Bleed		

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	--		
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
TFMXR0140NDG-001	50 State	0.02	--

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	28 - BRONCO RAPTOR 4WD	Federal	Part-time 4-Wheel Drive	Semi-Automatic	10	Yes
Ford Motor Company	1 - Ford	28 - BRONCO RAPTOR 4WD	California + CAA Section 177 states	Part-time 4-Wheel Drive	Semi-Automatic	10	Yes

Engine Description

Hybrid Type	--	**Hybrid Description**	--
Engine Type	4-Stroke Spark Ignition	**Mfr Engine Description**	3.0L GTDI V6
Engine Block Arrangement	V-shaped engine	**Mfr Engine Block Arrangement Description**	V-6
Camless Valvetrain Indicator	No	**Oil Viscosity/Classification**	SAE 5W-30 / ILSAC GF-7
Number of Cylinders/Rotors	6	**Mechanically Variable Compression Ratio Indicator**	N

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG

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
3	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
4	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	--

Engine Configuration Number 1

Engine Displacement (liters)	3.0	**Engine Rated Horsepower**	418
Number of Inlet Valves Per Cylinder	2	**Number of Exhaust Valves Per Cylinder**	2
Air Aspiration Method	Turbocharged	**Number of Air Aspiration Devices**	2
Air Aspiration Device Configuration	Parallel	**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, Oil Pressure Actuated VCT		
Variable Valve Lift?	No		
Variable Valve Lift System Description	--		
Number of Knock Sensors	2	**Number of Air/Fuel Sensors**	4
Air/Fuel Sensor # 1 Type	Heated air fuel	**Air/Fuel Sensor # 1 Description**	--
Air/Fuel Sensor # 2 Type	Heated air fuel	**Air/Fuel Sensor # 2 Description**	--
Air/Fuel Sensor # 3 Type	Heated oxygen	**Air/Fuel Sensor # 3 Description**	--
Air/Fuel Sensor # 4 Type	Heated oxygen	**Air/Fuel Sensor # 4 Description**	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	**Cooled Exhaust Gas Recirculation**	No
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	Bronco Raptor 97 RON Rated HP/Torque		

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG

Engine Configuration Number 2

Engine Displacement (liters)	3.0	**Engine Rated Horsepower**	405
Number of Inlet Valves Per Cylinder	2	**Number of Exhaust Valves Per Cylinder**	2
Air Aspiration Method	Turbocharged	**Number of Air Aspiration Devices**	2
Air Aspiration Device Configuration	Parallel	**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, Oil Pressure Actuated VCT		
Variable Valve Lift?	No		
Variable Valve Lift System Description	--		
Number of Knock Sensors	2	**Number of Air/Fuel Sensors**	4
Air/Fuel Sensor # 1 Type	Heated oxygen	**Air/Fuel Sensor # 1 Description**	--
Air/Fuel Sensor # 2 Type	Heated oxygen	**Air/Fuel Sensor # 2 Description**	--
Air/Fuel Sensor # 3 Type	Heated air fuel	**Air/Fuel Sensor # 3 Description**	--
Air/Fuel Sensor # 4 Type	Heated air fuel	**Air/Fuel Sensor # 4 Description**	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	**Cooled Exhaust Gas Recirculation**	No
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	Ranger Raptor 97 RON Rated HP/Torque		

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	NFMX10073249	NFMX10073250	NFMX10073255	NFMX10073254	NFMX10073256	16.1	228.2	19.3	286.1	1.0

SFTP LEV-III Official Test Numbers

Test Group Fuel	FTP	US06	SC03
Gasoline	NFMX10073249	NFMX10073250	NFMX10073255

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG

Emission Data Vehicle Information

Vehicle ID / Configuration	301W321 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	NFMXT02.31EM	**Original Evaporative/Refueling Family**	NFMXR0140NDG
Original Test Vehicle Model Year	2022		

Vehicle Model

Represented Test Vehicle Make	Ford	**Represented Test Vehicle Model**	Bronco

Leak Family Details

Leak Family Identifier	001	**Leak Family Name**	NFMXR0140NDG-001

Drive Sources and Fuel System Details

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	MTG1N3NB00	**Rated Horsepower**	270
Displacement (liters)	2.3		
Air Aspiration Method	Turbocharged	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	1	**Air Aspiration Device Configuration**	Single
Charge Air Cooler Type	Air	**Drive Mode While Testing**	2-Wheel Drive, Rear
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	5136	**Equivalent Test Weight (pounds)**	5500
GVWR (lbs)	6120	**N/V Ratio**	30.2
Axle Ratio	4.7		
Transmission Type	Semi-Automatic	**# of Transmission Gears**	10
Transmission Lockup	Yes	**Creeper Gear**	No

Dynamometer Coefficients:

	Target Coefficients			Set Coefficients			
Coefficient Category	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients**
City/Highway/Evap	44.07	0.6921	0.04663	20.96	0.5259	0.04582	26

Emission Control Device Comments 22MY BETP

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG

Manufacturer Test Vehicle Comments 2.3L GTDI Bronco 4X4

Test #	**NFMX10071316**	**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	02/15/2021	**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	5155	**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
HC-TOTAL (Total Hydrocarbon)	0.0151	--

Manufacturer Test Comments E10 Evaporative Test Measurement Method is Manufacturer FID w/o speciation. The pull down menu does not include this option.

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	0.0151	0	0.015	0.020	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL	0.0151	0	0.015	0.020	Pass

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG

Emission Data Vehicle Information

Vehicle ID / Configuration	MG11-2.3-J-203 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	MFMXT02.31EM	**Original Evaporative/Refueling Family**	MFMXR0140NDG
Original Test Vehicle Model Year	2021		

Vehicle Model

Represented Test Vehicle Make	Ford	**Represented Test Vehicle Model**	Bronco

Leak Family Details

Leak Family Identifier	001	**Leak Family Name**	MFMXR0140NDG-001

Drive Sources and Fuel System Details

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	MTG1N3NB00	**Rated Horsepower**	270
Displacement (liters)	2.3		
Air Aspiration Method	Turbocharged	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	1	**Air Aspiration Device Configuration**	Single
Charge Air Cooler Type	Air	**Drive Mode While Testing**	2-Wheel Drive, Rear
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	5136	**Equivalent Test Weight (pounds)**	5500
GVWR (lbs)	6120	**N/V Ratio**	30.2
Axle Ratio	4.7		
Transmission Type	Semi-Automatic	**# of Transmission Gears**	10
Transmission Lockup	Yes	**Creeper Gear**	No

Certification Summary Information Report

Test Group	TFMXT03.03V7	Evaporative/Refueling Family	TFMXR0140NDG

Dynamometer Coefficients:

Coefficient Category	Target Coefficients A (lbf)	Target Coefficients B (lbf/mph)	Target Coefficients C (lbf/mph**2)	Set Coefficients A (lbf)	Set Coefficients B (lbf/mph)	Set Coefficients C (lbf/mph**2)	EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
City/Highway/Evap	51.84	0.6755	0.04816	25.85	0.548	0.0465	27.5
Cold CO	51.84	0.6755	0.04816	25.85	0.548	0.0465	N/A
US06	51.84	0.6755	0.04816	25.85	0.548	0.0465	N/A

Emission Control Device Comments T21-0129-01 T3B70 L3B70

Manufacturer Test Vehicle Comments 2.3L GTDI Bronco 4X4

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG

Test #	**MFMX10067778**	**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	09/22/2020	**Fuel**	N/A
Fuel Batch ID	373-B	**Fuel Calibration Number**	54
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	4795	**Odometer Units**	M
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**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	486.46295	--
FE BAG 1 (Bag 1 Fuel Economy)	17.78016	17.78016
CO2 BAG 2 (Bag 2 Carbon Dioxide)	453.93757	--
FE BAG 2 (Bag 2 Fuel Economy)	19.11774	19.11774
CO2 BAG 3 (Bag 3 Carbon Dioxide)	452.73368	--
FE BAG 3 (Bag 3 Fuel Economy)	19.13135	19.13135
METHANE (CH4 - Methane)	0.00838	--
CO (Carbon Monoxide)	0.5004	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.917377	--
DT-EER (Drive Trace Energy Economy Rating)	0.0376276	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.0471	--
MFR FE (Manufacturer Fuel Economy)	18.84256	18.84256
NOX (Nitrogen Oxide)	0.01162	--
N2O (Nitrous Oxide)	0.0008	--
HC-NM (Non-methane Hydrocarbon)	0.0101973	--
NMOG (Non-methane organic gases)	0.0112	--
PM (Particulate Matter)	0.0011645	--
HC-TOTAL (Total Hydrocarbon)	0.01809	--

Certification Summary Information Report

Test Group	TFMXT03.03V7	Evaporative/Refueling Family	TFMXR0140NDG

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	461	999
Optional Carbon-Related Exhaust Emissions	461	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	460.34213	--

Manufacturer Test Comments NMOG = 1.04 * NMHCr

Test #	**MFMX10067811**	**Test Procedure**	**23 - 2-day evap**
Exhaust Test # for this Evap Test	MFMX10067778	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	10/09/2020	**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	4969	**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)
OMHCE (Organic material Hydrocarbon Equivalent)	0.3375	--
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.3375	--

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	0.3375	0.0000	0.338	0.500	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	OMHCE	0.3375	0.0000	0.338	0.500	Pass

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG

Test #	**MFMX10068292**	**Test Procedure**	**34 - Federal fuel 3-day evap**
Exhaust Test # for this Evap Test	MFMX10067778	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	11/16/2020	**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	5126	**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)
OMHCE (Organic material Hydrocarbon Equivalent)	0.3726	--
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.3726	--

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	0.3726	0.0000	0.373	0.500	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	OMHCE	0.3726	0.0000	0.373	0.500	Pass

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG

Test #	**MFMX10067812**	**Test Procedure**	**24 - Federal fuel refueling test (ORVR)**
Exhaust Test # for this Evap Test	MFMX10067778	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	12/02/2020	**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	5050	**Odometer Units**	M
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**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
OMHCE (Organic material Hydrocarbon Equivalent)	0.098	--
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.098	--

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	0.098	0.002	0.10	0.20	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	OMHCE	0.098	0.002	0.10	0.20	Pass

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG

Test #	**MFMX10067818**	**Test Procedure**	**32 - Federal Fuel Running Loss**
Exhaust Test # for this Evap Test	MFMX10067778	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	11/13/2020	**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	5126	**Odometer Units**	M
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**	Yes

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	0.000	0.00	0.05	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	OMHCE	0.000	0.0000	0.00	0.05	Pass

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG

Emission Data Vehicle Information

Vehicle ID / Configuration	NG11-3.0-J-509 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	NFMXT03.03V7	**Original Evaporative/Refueling Family**	NFMXR0140NDG
Original Test Vehicle Model Year	2022		

Vehicle Model

Represented Test Vehicle Make	Ford	**Represented Test Vehicle Model**	BRONCO RAPTOR 4WD

Leak Family Details

Leak Family Identifier	001	**Leak Family Name**	NFMXR0140NDG-001

Drive Sources and Fuel System Details

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	NTG1DDNB02	**Rated Horsepower**	400
Displacement (liters)	3		
Air Aspiration Method	Turbocharged	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	2	**Air Aspiration Device Configuration**	Parallel
Charge Air Cooler Type	Air	**Drive Mode While Testing**	2-Wheel Drive, Rear
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	5725	**Equivalent Test Weight (pounds)**	6000
GVWR (lbs)	6850	**N/V Ratio**	28.2
Axle Ratio	4.7		
Transmission Type	Semi-Automatic	**# of Transmission Gears**	10
Transmission Lockup	Yes	**Creeper Gear**	No

Certification Summary Information Report

Test Group	TFMXT03.03V7	Evaporative/Refueling Family	TFMXR0140NDG

Dynamometer Coefficients:

Coefficient Category	Target Coefficients A (lbf)	Target Coefficients B (lbf/mph)	Target Coefficients C (lbf/mph**2)	Set Coefficients A (lbf)	Set Coefficients B (lbf/mph)	Set Coefficients C (lbf/mph**2)	EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
City/Highway/Evap	47.73	0.4815	0.04793	22.32	0.3963	0.04569	25.6
Cold CO	47.73	0.4815	0.04793	22.32	0.3963	0.04569	N/A
US06	47.73	0.4815	0.04793	22.32	0.3963	0.04569	N/A

Emission Control Device Comments T3B50/ULEV50,SFTP-0.060, PM3, CB4, T3e/L3e

Manufacturer Test Vehicle Comments BRONCO RAPTOR (U725) 3.0L GTDI 4X4

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG

Test #	**NFMX10073249**	**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	11/10/2021	**Fuel**	Gasoline
Fuel Batch ID	373-B	**Fuel Calibration Number**	61
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**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	3768	**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**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	519.93345	--
FE BAG 1 (Bag 1 Fuel Economy)	16.61677	16.61677
CO2 BAG 2 (Bag 2 Carbon Dioxide)	520.66857	--
FE BAG 2 (Bag 2 Fuel Economy)	16.61038	16.61038
CO2 BAG 3 (Bag 3 Carbon Dioxide)	485.75095	--
FE BAG 3 (Bag 3 Fuel Economy)	17.80453	17.80453
METHANE (CH4 - Methane)	0.00275	--
CO (Carbon Monoxide)	0.16058	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.70039	--
DT-EER (Drive Trace Energy Economy Rating)	-1.10081	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-2.2235	--
HCHO (Formaldehyde)	0.000096	--
MFR FE (Manufacturer Fuel Economy)	16.9294	16.9294
NOX (Nitrogen Oxide)	0.00935	--
N2O (Nitrous Oxide)	0.0014	--
HC-NM (Non-methane Hydrocarbon)	0.0057833	--
NMOG (Non-methane organic gases)	0.00619	--
PM (Particulate Matter)	0.0007229	--
HC-TOTAL (Total Hydrocarbon)	0.00834	--

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	511	999
Optional Carbon-Related Exhaust Emissions	512	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	510.92224	--

Manufacturer Test Comments NMOG = 1.1 * NMHCr

Certification Summary Information Report

Test Group TFMXT03.03V7 **Evaporative/Refueling Family** TFMXR0140NDG

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 50	CO	0.16	--	--	--	0.13	--	0.3	1.7	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	CO-COMP	0.40	--	--	--	--	--	0.4	4.2	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	CREE	999	--	--	--	0.2	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 50	HCHO	0.0001	--	--	--	0	--	0.000	0.004	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	METHANE	0.0028	--	--	--	0.002	--	0.005	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	N2O	0.0014	--	--	--	0.003	--	0.004	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NMOG	0.0062	--	1.1	--	0.0095	--	0.016	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NMOG+NOX	0.0156	--	--	--	--	--	0.034	0.050	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NMOG+NOX-COMP	0.0446	--	--	--	--	--	0.045	0.090	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NOX	0.0094	--	--	--	0.0092	--	0.019	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	OPT-CREE	999	--	--	--	0.3	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 50	PM	0.0007	--	--	--	0	--	0.001	0.003	Pass
CA	150,000 miles	California LEV-III ULEV50	CO	0.16	--	--	--	0.13	--	0.3	1.7	Pass
CA	150,000 miles	California LEV-III ULEV50	CO-COMP	0.44	--	--	--	--	--	0.4	4.2	Pass
CA	150,000 miles	California LEV-III ULEV50	HCHO	0.0001	--	--	--	0	--	0.000	0.004	Pass
CA	150,000 miles	California LEV-III ULEV50	NMOG	0.0062	--	1.1	--	0.0095	--	0.016	999.999	Pass
CA	150,000 miles	California LEV-III ULEV50	NMOG+NOX	0.0156	--	--	--	--	--	0.034	0.050	Pass
CA	150,000 miles	California LEV-III ULEV50	NMOG+NOX-COMP	0.0446	--	--	--	--	--	0.045	0.090	Pass
CA	150,000 miles	California LEV-III ULEV50	NOX	0.0094	--	--	--	0.0092	--	0.019	999.999	Pass
CA	150,000 miles	California LEV-III ULEV50	PM	0.0007	--	--	--	0	--	0.001	0.003	Pass

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

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG

Test #	**NFMX10073251**	**Test Procedure**	**52 - Fed. fuel 50 F exh.**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	12/09/2021	**Fuel**	Gasoline
Fuel Batch ID	373-B	**Fuel Calibration Number**	61
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**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	3912	**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)
CO (Carbon Monoxide)	0.29558	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.0518979	--
DT-EER (Drive Trace Energy Economy Rating)	-0.281998	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.131507	--
HCHO (Formaldehyde)	0.000534	--
NOX (Nitrogen Oxide)	0.00577	--
NMOG (Non-methane organic gases)	0.01586	--
HC-TOTAL (Total Hydrocarbon)	0.02022	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	493.82246	--

Manufacturer Test Comments 50F NMOG NMOG = 1.1 * NMHCr

Certification Summary Information Report

Test Group TFMXT03.03V7 **Evaporative/Refueling Family** TFMXR0140NDG

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
CA	4,000 miles	California LEV-III ULEV50	CO	0.30	--	--	--	--	--	0.3	1.7	Pass
CA	4,000 miles	California LEV-III ULEV50	HCHO	0.0005	--	--	--	--	--	0.000	0.016	Pass
CA	4,000 miles	California LEV-III ULEV50	NMOG	0.0159	--	--	--	--	--	0.016	999.999	Pass
CA	4,000 miles	California LEV-III ULEV50	NMOG+NOX	0.0217	--	--	--	--	--	0.022	0.100	Pass
CA	4,000 miles	California LEV-III ULEV50	NOX	0.0058	--	--	--	--	--	0.006	999.999	Pass

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG

Test #	**NFMX10073254**	**Test Procedure**	**11 - Cold CO**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	28 - Cold CO E10 Regular Gasoline (Tier 3)
Test Date	11/19/2021	**Fuel**	Gasoline
Fuel Batch ID	375-B	**Fuel Calibration Number**	39
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**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	3845	**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)	678.90411	--
FE BAG 1 (Bag 1 Fuel Economy)	12.71021	12.71021
CO2 BAG 2 (Bag 2 Carbon Dioxide)	527.78097	--
FE BAG 2 (Bag 2 Fuel Economy)	16.48169	16.48169
CO2 BAG 3 (Bag 3 Carbon Dioxide)	504.07392	--
FE BAG 3 (Bag 3 Fuel Economy)	17.26398	17.26398
METHANE (CH4 - Methane)	0.01663	--
CO (Carbon Monoxide)	0.75254	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	2.13219	--
DT-EER (Drive Trace Energy Economy Rating)	0.379174	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	3.25067	--
MFR FE (Manufacturer Fuel Economy)	15.70279	15.70279
NOX (Nitrogen Oxide)	0.01106	--
HC-NM (Non-methane Hydrocarbon)	0.0727255	--
NMOG (Non-methane organic gases)	0.07992	--
HC-TOTAL (Total Hydrocarbon)	0.08926	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	552.59632	--

Manufacturer Test Comments NMOG = 1.1 * NMHCr

Certification Summary Information Report

Test Group TFMXT03.03V7 **Evaporative/Refueling Family** TFMXR0140NDG

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 50	CO	0.75	--	--	--	0.04	--	0.8	12.5	Pass
Fed	120,000 miles	Federal Tier 3 Bin 50	HC-NM	0.07	--	--	--	0.0069	--	0.1	0.4	Pass
CA	50,000 miles	California LEV-III ULEV50	CO	0.75	--	--	--	0.04	--	0.8	12.5	Pass

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG

Test #	**NFMX10073256**	**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	11/10/2021	**Fuel**	Gasoline
Fuel Batch ID	373-B	**Fuel Calibration Number**	61
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**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	3779	**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)	0.00056	--
CO (Carbon Monoxide)	0.06775	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.41557	--
DT-EER (Drive Trace Energy Economy Rating)	-0.0626554	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	2.20548	--
HCHO (Formaldehyde)	0	--
MFR FE (Manufacturer Fuel Economy)	21.96239	21.96239
NOX (Nitrogen Oxide)	0.0065	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0.0001263	--
NMOG (Non-methane organic gases)	0.00017	--
HC-TOTAL (Total Hydrocarbon)	0.00064	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	394	999
Optional Carbon-Related Exhaust Emissions	394	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	393.64375	--

Manufacturer Test Comments NMOG = 1.03 * NMHCr

Certification Summary Information Report

Test Group TFMXT03.03V7 **Evaporative/Refueling Family** TFMXR0140NDG

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 50	CREE	999	--	--	--	0.2	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 50	NMOG	0.0002	--	1.03	--	0.0095	--	0.010	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NMOG+NOX	0.0067	--	--	--	--	--	0.025	0.050	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NOX	0.0065	--	--	--	0.0092	--	0.016	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	OPT-CREE	999	--	--	--	0.3	--	999	--	--
CA	150,000 miles	California LEV-III ULEV50	NMOG	0.0002	--	1.03	--	0.0095	--	0.010	999.999	Pass
CA	150,000 miles	California LEV-III ULEV50	NMOG+NOX	0.0067	--	--	--	--	--	0.025	0.050	Pass
CA	150,000 miles	California LEV-III ULEV50	NOX	0.0065	--	--	--	0.0092	--	0.016	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	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG

Test #	**NFMX10073250**	**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	11/10/2021	**Fuel**	Gasoline
Fuel Batch ID	373-B	**Fuel Calibration Number**	61
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**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	3801	**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)	855.00911	--
FE BAG 1 (Bag 1 Fuel Economy)	10.1173	10.1173
CO2 BAG 2 (Bag 2 Carbon Dioxide)	541.16255	--
FE BAG 2 (Bag 2 Fuel Economy)	15.98959	15.98959
METHANE (CH4 - Methane)	0.00269	--
CO (Carbon Monoxide)	0.2232	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.27188	--
DT-EER (Drive Trace Energy Economy Rating)	-0.967352	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.42506	--
HCHO (Formaldehyde)	0	--
MFR FE (Manufacturer Fuel Economy)	14.15776	14.15776
NOX (Nitrogen Oxide)	0.08073	--
HC-NM (Non-methane Hydrocarbon)	0.0053775	--
NMOG (Non-methane organic gases)	0.00536	--
PM (Particulate Matter)	0.0016396	--
HC-NM+NOX (SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03)	0.0861075	--
HC-TOTAL (Total Hydrocarbon)	0.00789	--

Certification Summary Information Report

Test Group TFMXT03.03V7 **Evaporative/Refueling Family** TFMXR0140NDG

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	610.92174	--

Manufacturer Test Comments NMOG = 1.03 * NMHCr

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 50	PM	0.0016	--	--	--	0	--	0.002	0.006	Pass
CA	150,000 miles	California LEV-III ULEV50	PM	0.0016	--	--	--	0	--	0.002	0.006	Pass

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG

Test #	**NFMX10073255**	**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	11/12/2021	**Fuel**	N/A
Fuel Batch ID	373-B	**Fuel Calibration Number**	61
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	3828	**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)
CO (Carbon Monoxide)	0.51421	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.71285	--
DT-EER (Drive Trace Energy Economy Rating)	-1.10154	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.77711	--
HCHO (Formaldehyde)	0	--
MFR FE (Manufacturer Fuel Economy)	14.05589	14.05589
NOX (Nitrogen Oxide)	0.00433	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--
HC-NM+NOX (SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03)	0.00433	--
HC-TOTAL (Total Hydrocarbon)	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	614.81528	--

Manufacturer Test Comments NMOG = 1.03 * NMHCr

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG

Fuel Properties

Fuel Batch ID	**373-B**	**Fuel Calibration Number**	**61**
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	07/29/2021
Fuel Batch Calibration Effective Date	07/29/2021	**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**	0.752
Fuel Ethanol Volume Percent (%)	9.6	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17929
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.833	**Weight Fraction CO2**	--

Fuel Batch ID	**375-B**	**Fuel Calibration Number**	**39**
Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)	**Fuel Batch Calibration Date**	11/02/2021
Fuel Batch Calibration Effective Date	11/02/2021	**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**	0.744
Fuel Ethanol Volume Percent (%)	9.7	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17857
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.83	**Weight Fraction CO2**	--

Fuel Batch ID	**373-B**	**Fuel Calibration Number**	**54**
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	08/31/2020
Fuel Batch Calibration Effective Date	08/31/2020	**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**	0.752
Fuel Ethanol Volume Percent (%)	9.6	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17958
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.827	**Weight Fraction CO2**	--

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG

Consolidated List of Standards

Exhaust Standards

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Both
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	California LEV-III ULEV50
Fuel	Gasoline	**Test Procedure**	Cold CO

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
50,000 miles	CO	--	--	--	--	--	--	0.04	12.5

Cert Region	Federal	**Cert/In-Use Code**	Both
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	Federal Tier 3 Bin 50
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	--	--	--	--	--	--	0.2	999.999
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0095	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0187	0.050
150,000 miles	NOX	--	--	--	--	--	--	0.0092	999.999
150,000 miles	OPT-CREE	--	--	--	--	--	--	0.3	999.999

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG
Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Both
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	California LEV-III ULEV50
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	--	--	--	--	--	--	0.13	1.7
150,000 miles	CO-COMP	--	--	--	--	--	--	--	4.2
150,000 miles	HCHO	--	--	--	--	--	--	0	0.004
150,000 miles	NMOG	--	--	1.1	--	--	--	0.0095	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0187	0.050
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	--	0.090
150,000 miles	NOX	--	--	--	--	--	--	0.0092	999.999
150,000 miles	PM	--	--	--	--	--	--	0	0.003

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Both
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	California LEV-III ULEV50
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	--	--	--	0.0095	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0187	0.050
150,000 miles	NOX	--	--	--	--	--	--	0.0092	999.999

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG
Cert Region	Federal	**Cert/In-Use Code**	Both
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	Federal Tier 3 Bin 50
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	--	--	--	--	--	--	0.13	1.7
150,000 miles	CO-COMP	--	--	--	--	--	--	--	4.2
150,000 miles	CREE	--	--	--	--	--	--	0.2	999.999
150,000 miles	HCHO	--	--	--	--	--	--	0	0.004
150,000 miles	METHANE	--	--	--	--	--	--	0.002	0.030
150,000 miles	N2O	--	--	--	--	--	--	0.003	0.010
150,000 miles	NMOG	--	--	1.1	--	--	--	0.0095	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0187	0.050
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	--	0.090
150,000 miles	NOX	--	--	--	--	--	--	0.0092	999.999
150,000 miles	OPT-CREE	--	--	--	--	--	--	0.3	999.999
150,000 miles	PM	--	--	--	--	--	--	0	0.003

Cert Region	Federal	**Cert/In-Use Code**	Both
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	Federal Tier 3 Bin 50
Fuel	Gasoline	**Test Procedure**	Cold CO

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
50,000 miles	CO	--	--	--	--	--	--	0.04	12.5
120,000 miles	HC-NM	--	--	--	--	--	--	0.0069	0.4

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG
Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Both
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	California LEV-III ULEV50
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	NMOG	--	--	1.03	--	--	--	--	999.999
150,000 miles	NOX	--	--	--	--	--	--	--	999.999
150,000 miles	PM	--	--	--	--	--	--	0	0.006

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Both
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	California LEV-III ULEV50
Fuel	Gasoline	**Test Procedure**	Fed. fuel 50 F exh.

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
4,000 miles	CO	--	--	--	--	--	--	--	1.7
4,000 miles	HCHO	--	--	--	--	--	--	--	0.016
4,000 miles	NMOG	--	--	--	--	--	--	--	999.999
4,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.100
4,000 miles	NOX	--	--	--	--	--	--	--	999.999

Cert Region	Federal	**Cert/In-Use Code**	Both
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	Federal Tier 3 Bin 50
Fuel	Gasoline	**Test Procedure**	US06

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	--	999.999
150,000 miles	NMOG	--	--	1.03	--	--	--	--	999.999
150,000 miles	NOX	--	--	--	--	--	--	--	999.999
150,000 miles	PM	--	--	--	--	--	--	0	0.006

Evaporative/Refueling Standards

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG

Evaporative/Refueling Family	TFMXR0140NDG	**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	0.002

Evaporative/Refueling Family	TFMXR0140NDG	**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	--	0.500	0.0000

Evaporative/Refueling Family	TFMXR0140NDG	**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	HC-TOTAL	--	0.020	0

Evaporative/Refueling Family	TFMXR0140NDG	**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	0.002

Evaporative/Refueling Family	TFMXR0140NDG	**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	--	0.020	0

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG

Evaporative/Refueling Family TFMXR0140NDG
Cert/In-Use Code Both
Test Procedure 2-day evap
Cert Region Federal
Standard Level Federal Tier 3 Evap

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.500	0.0000

Evaporative/Refueling Family TFMXR0140NDG
Cert/In-Use Code Both
Test Procedure Federal Fuel Running Loss
Cert Region Federal
Standard Level Federal Tier 3 Evap

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.05	0.000

Evaporative/Refueling Family TFMXR0140NDG
Cert/In-Use Code Both
Test Procedure Federal fuel 3-day evap
Cert Region Federal
Standard Level Federal Tier 3 Evap

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.500	0.0000

Evaporative/Refueling Family TFMXR0140NDG
Cert/In-Use Code Both
Test Procedure Federal Fuel Running Loss
Cert Region California + CAA Section 177 states
Standard Level California LEV-III Zero Evap (Option 2)

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	OMHCE	--	0.05	0.0000

Evaporative/Refueling Family TFMXR0140NDG
Cert/In-Use Code Both
Test Procedure Federal fuel 3-day evap
Cert Region California + CAA Section 177 states
Standard Level California LEV-III Zero Evap (Option 2)

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	OMHCE	--	0.500	0.0000

Certification Summary Information Report

Test Group	TFMXT03.03V7	Evaporative/Refueling Family	TFMXR0140NDG

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

Certification Region

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG
CA	California + CAA Section 177 states	FA	Federal

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

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDG
L3SULEV170	California LEV-III SULEV170	L4ULEV200	California LEV-IV ULEV200
L3SULEV150	California LEV-III SULEV150	L4ULEV250	California LEV-IV ULEV250
L3LEV630	California LEV-III LEV630	L4ULEV270	California LEV-IV ULEV270
L3ULEV570	California LEV-III ULEV570	L4ULEV40	California LEV-IV ULEV40
L3ULEV400	California LEV-III ULEV400	L4ULEV400	California LEV-IV ULEV400
L3ULEV270	California LEV-III ULEV270	L4ULEV50	California LEV-IV ULEV50
L3SULEV230	California LEV-III SULEV230	L4ULEV60	California LEV-IV ULEV60
L3SULEV200	California LEV-III SULEV200	L4ULEV70	California LEV-IV ULEV70

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
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

Certification Summary Information Report

Manufacturer	Ford Motor Company	**Manufacturer Code**	FMX
Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV
Certificate Number	--	**CARB Executive Order #**	--
Certificate Issue Date	--	**Certificate Revision Date**	--
Certificate Effective Date	--	**Conditional Certificate**	--
CSI Revision #	--	**CSI Submission/Revision Date**	11/03/2025 08:33:52 AM
Model Year	2026		

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 fuel 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**	LDT4
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	TFMXGPGNND4A	**Durability Group Equivalency Factor**	1.0
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**	TFMXT03.0JPC
Test Group OBD Compliance Level	Partial - with deficiencies and penalty	**Number of Test Group OBD Deficiencies**	3
OBD Deficiencies Comments	--		
Mfr Test Group Comments	E10 City Litmus Value = 13.6 mpg, City Litmus Threshold = 13.2 mpg, E10 HWY Litmus Value = 15.0 mpg, HWY Litmus Threshold = 15.3 mpg.		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV

Evaporative/Refueling Family Information

Evaporative Summary Information Type	Update for Correction	**Submission/Correction Date**	08/28/2025 10:15:23 AM
Integrated ORVR?	Yes	**Fuel(s)**	Gasoline
Multiple Fuel Storage	--		
Bladder Fuel Tank?	No		
Fuel Tank Material	Other	**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**	AIS Hydrocarbon Trap
Fuel System Vapor Storage Canister?	Yes	**Other Vapor Storage**	See comments below
Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)	140	**Number of Primary Canisters**	1
Number of Bleed Canisters	1	**Bleed Canister Total Working Capacity (grams)**	1
Mfr Evaporative/Refueling Family Comments	1 X 2.1L HA 3-port Rect. + 1 X 0.066L Bleed		

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	--		
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
TFMXR0140NDV-001	50 State	0.02	--

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	178 - RANGER RAPTOR 4WD	Federal	Part-time 4-Wheel Drive	Semi-Automatic	10	Yes
Ford Motor Company	1 - Ford	178 - RANGER RAPTOR 4WD	California + CAA Section 177 states	Part-time 4-Wheel Drive	Semi-Automatic	10	Yes

Engine Description

Hybrid Type	--	**Hybrid Description**	--
Engine Type	4-Stroke Spark Ignition	**Mfr Engine Description**	3.0L GTDI V6
Engine Block Arrangement	V-shaped engine	**Mfr Engine Block Arrangement Description**	V-6
Camless Valvetrain Indicator	No	**Oil Viscosity/Classification**	SAE 5W-30 / ILSAC GF-7
Number of Cylinders/Rotors	6	**Mechanically Variable Compression Ratio Indicator**	N

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV

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
3	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
4	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	--

Engine Configuration Number 1

Engine Displacement (liters)	3.0	**Engine Rated Horsepower**	418
Number of Inlet Valves Per Cylinder	2	**Number of Exhaust Valves Per Cylinder**	2
Air Aspiration Method	Turbocharged	**Number of Air Aspiration Devices**	2
Air Aspiration Device Configuration	Parallel	**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, Oil Pressure Actuated VCT		
Variable Valve Lift?	No		
Variable Valve Lift System Description	--		
Number of Knock Sensors	2	**Number of Air/Fuel Sensors**	4
Air/Fuel Sensor # 1 Type	Heated air fuel	**Air/Fuel Sensor # 1 Description**	--
Air/Fuel Sensor # 2 Type	Heated air fuel	**Air/Fuel Sensor # 2 Description**	--
Air/Fuel Sensor # 3 Type	Heated oxygen	**Air/Fuel Sensor # 3 Description**	--
Air/Fuel Sensor # 4 Type	Heated oxygen	**Air/Fuel Sensor # 4 Description**	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	**Cooled Exhaust Gas Recirculation**	No
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	Bronco Raptor 97 RON Rated HP/Torque		

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV

Engine Configuration Number 2

Engine Displacement (liters)	3.0	**Engine Rated Horsepower**	405
Number of Inlet Valves Per Cylinder	2	**Number of Exhaust Valves Per Cylinder**	2
Air Aspiration Method	Turbocharged	**Number of Air Aspiration Devices**	2
Air Aspiration Device Configuration	Parallel	**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, Oil Pressure Actuated VCT		
Variable Valve Lift?	No		
Variable Valve Lift System Description	--		
Number of Knock Sensors	2	**Number of Air/Fuel Sensors**	4
Air/Fuel Sensor # 1 Type	Heated oxygen	**Air/Fuel Sensor # 1 Description**	--
Air/Fuel Sensor # 2 Type	Heated oxygen	**Air/Fuel Sensor # 2 Description**	--
Air/Fuel Sensor # 3 Type	Heated air fuel	**Air/Fuel Sensor # 3 Description**	--
Air/Fuel Sensor # 4 Type	Heated air fuel	**Air/Fuel Sensor # 4 Description**	--
Mfr Air/Fuel Sensor Comments	--		
Exhaust Gas Recirculation	No	**Cooled Exhaust Gas Recirculation**	No
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	Ranger Raptor 97 RON Rated HP/Torque		

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	NFMX10073249	NFMX10073250	NFMX10073255	NFMX10073254	NFMX10073256	16.1	228.2	19.3	286.1	1.0

SFTP LEV-III Official Test Numbers

Test Group Fuel	FTP	US06	SC03
Gasoline	NFMX10073249	NFMX10073250	NFMX10073255

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV

Emission Data Vehicle Information

Vehicle ID / Configuration	318W879 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	RFMXT03.03V7	**Original Evaporative/Refueling Family**	RFMXR0140NDV
Original Test Vehicle Model Year	2024		

Vehicle Model

Represented Test Vehicle Make	Ford	**Represented Test Vehicle Model**	RANGER RAPTOR 4WD

Leak Family Details

Leak Family Identifier	001	**Leak Family Name**	RFMXR0140NDV-001

Drive Sources and Fuel System Details

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	RTRDDDNA05	**Rated Horsepower**	400
Displacement (liters)	3		
Air Aspiration Method	Turbocharged	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	2	**Air Aspiration Device Configuration**	Parallel
Charge Air Cooler Type	Air	**Drive Mode While Testing**	2-Wheel Drive, Rear
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	5379	**Equivalent Test Weight (pounds)**	5500
GVWR (lbs)	6790	**N/V Ratio**	28.8
Axle Ratio	4.27		
Transmission Type	Semi-Automatic	**# of Transmission Gears**	10
Transmission Lockup	Yes	**Creeper Gear**	No

Dynamometer Coefficients:

	Target Coefficients			Set Coefficients			
Coefficient Category	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients**
City/Highway/Evap	56.19	0.2099	0.04199	24.87	0.2935	0.03839	22.9

Emission Control Device Comments T3B50/ULEV50,SFTP-0.060, PM3, CB4, T3e/L3e

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV
Manufacturer Test Vehicle Comments	RANGER RAPTOR (P703) 3.0L GTDI 4X4		

Test #	**RFMX10079536**	**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	02/07/2023	**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	5101	**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
HC-TOTAL (Total Hydrocarbon)	0.004	--

Manufacturer Test Comments E10 Evaporative Test Measurement Method is Manufacturer FIDw/o speciation. The pull down menu does not include this option

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	0.0040	0	0.004	0.020	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL	0.0040	0	0.004	0.020	Pass

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV

Emission Data Vehicle Information

Vehicle ID / Configuration	NG11-3.0-J-509 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	NFMXT03.03V7	**Original Evaporative/Refueling Family**	NFMXR0140NDG
Original Test Vehicle Model Year	2022		

Vehicle Model

Represented Test Vehicle Make	Ford	**Represented Test Vehicle Model**	BRONCO RAPTOR 4WD

Leak Family Details

Leak Family Identifier	001	**Leak Family Name**	NFMXR0140NDG-001

Drive Sources and Fuel System Details

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	NTG1DDNB02	**Rated Horsepower**	400
Displacement (liters)	3		
Air Aspiration Method	Turbocharged	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	2	**Air Aspiration Device Configuration**	Parallel
Charge Air Cooler Type	Air	**Drive Mode While Testing**	2-Wheel Drive, Rear
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	5725	**Equivalent Test Weight (pounds)**	6000
GVWR (lbs)	6850	**N/V Ratio**	28.2
Axle Ratio	4.7		
Transmission Type	Semi-Automatic	**# of Transmission Gears**	10
Transmission Lockup	Yes	**Creeper Gear**	No

Certification Summary Information Report

Test Group	TFMXT03.03V7	Evaporative/Refueling Family	TFMXR0140NDV

Dynamometer Coefficients:

Coefficient Category	Target Coefficients A (lbf)	Target Coefficients B (lbf/mph)	Target Coefficients C (lbf/mph**2)	Set Coefficients A (lbf)	Set Coefficients B (lbf/mph)	Set Coefficients C (lbf/mph**2)	EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
City/Highway/Evap	47.73	0.4815	0.04793	22.32	0.3963	0.04569	25.6
Cold CO	47.73	0.4815	0.04793	22.32	0.3963	0.04569	N/A
US06	47.73	0.4815	0.04793	22.32	0.3963	0.04569	N/A

Emission Control Device Comments T3B50/ULEV50,SFTP-0.060, PM3, CB4, T3e/L3e

Manufacturer Test Vehicle Comments BRONCO RAPTOR (U725) 3.0L GTDI 4X4

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV

Test #	**NFMX10073249**	**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	11/10/2021	**Fuel**	Gasoline
Fuel Batch ID	373-B	**Fuel Calibration Number**	61
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**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	3768	**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**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	519.93345	--
FE BAG 1 (Bag 1 Fuel Economy)	16.61677	16.61677
CO2 BAG 2 (Bag 2 Carbon Dioxide)	520.66857	--
FE BAG 2 (Bag 2 Fuel Economy)	16.61038	16.61038
CO2 BAG 3 (Bag 3 Carbon Dioxide)	485.75095	--
FE BAG 3 (Bag 3 Fuel Economy)	17.80453	17.80453
METHANE (CH4 - Methane)	0.00275	--
CO (Carbon Monoxide)	0.16058	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.70039	--
DT-EER (Drive Trace Energy Economy Rating)	-1.10081	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-2.2235	--
HCHO (Formaldehyde)	0.000096	--
MFR FE (Manufacturer Fuel Economy)	16.9294	16.9294
NOX (Nitrogen Oxide)	0.00935	--
N2O (Nitrous Oxide)	0.0014	--
HC-NM (Non-methane Hydrocarbon)	0.0057833	--
NMOG (Non-methane organic gases)	0.00619	--
PM (Particulate Matter)	0.0007229	--
HC-TOTAL (Total Hydrocarbon)	0.00834	--

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	511	999
Optional Carbon-Related Exhaust Emissions	512	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	510.92224	--

Manufacturer Test Comments NMOG = 1.1 * NMHCr

Certification Summary Information Report

Test Group TFMXT03.03V7 **Evaporative/Refueling Family** TFMXR0140NDV

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 50	CO	0.16	--	--	--	0.13	--	0.3	1.7	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	CO-COMP	0.40	--	--	--	--	--	0.4	4.2	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	CREE	999	--	--	--	0.2	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 50	HCHO	0.0001	--	--	--	0	--	0.000	0.004	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	METHANE	0.0028	--	--	--	0.002	--	0.005	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	N2O	0.0014	--	--	--	0.003	--	0.004	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NMOG	0.0062	--	1.1	--	0.0095	--	0.016	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NMOG+NOX	0.0156	--	--	--	--	--	0.034	0.050	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NMOG+NOX-COMP	0.0446	--	--	--	--	--	0.045	0.090	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NOX	0.0094	--	--	--	0.0092	--	0.019	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	OPT-CREE	999	--	--	--	0.3	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 50	PM	0.0007	--	--	--	0	--	0.001	0.003	Pass
CA	150,000 miles	California LEV-III ULEV50	CO	0.16	--	--	--	0.13	--	0.3	1.7	Pass
CA	150,000 miles	California LEV-III ULEV50	CO-COMP	0.44	--	--	--	--	--	0.4	4.2	Pass
CA	150,000 miles	California LEV-III ULEV50	HCHO	0.0001	--	--	--	0	--	0.000	0.004	Pass
CA	150,000 miles	California LEV-III ULEV50	NMOG	0.0062	--	1.1	--	0.0095	--	0.016	999.999	Pass
CA	150,000 miles	California LEV-III ULEV50	NMOG+NOX	0.0156	--	--	--	--	--	0.034	0.050	Pass
CA	150,000 miles	California LEV-III ULEV50	NMOG+NOX-COMP	0.0446	--	--	--	--	--	0.045	0.090	Pass
CA	150,000 miles	California LEV-III ULEV50	NOX	0.0094	--	--	--	0.0092	--	0.019	999.999	Pass
CA	150,000 miles	California LEV-III ULEV50	PM	0.0007	--	--	--	0	--	0.001	0.003	Pass

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

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV

Test #	**NFMX10073251**	**Test Procedure**	**52 - Fed. fuel 50 F exh.**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	12/09/2021	**Fuel**	Gasoline
Fuel Batch ID	373-B	**Fuel Calibration Number**	61
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**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	3912	**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)
CO (Carbon Monoxide)	0.29558	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.0518979	--
DT-EER (Drive Trace Energy Economy Rating)	-0.281998	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.131507	--
HCHO (Formaldehyde)	0.000534	--
NOX (Nitrogen Oxide)	0.00577	--
NMOG (Non-methane organic gases)	0.01586	--
HC-TOTAL (Total Hydrocarbon)	0.02022	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	493.82246	--

Manufacturer Test Comments 50F NMOG NMOG = 1.1 * NMHCr

Certification Summary Information Report

Test Group TFMXT03.03V7 **Evaporative/Refueling Family** TFMXR0140NDV

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
CA	4,000 miles	California LEV-III ULEV50	CO	0.30	--	--	--	--	--	0.3	1.7	Pass
CA	4,000 miles	California LEV-III ULEV50	HCHO	0.0005	--	--	--	--	--	0.000	0.016	Pass
CA	4,000 miles	California LEV-III ULEV50	NMOG	0.0159	--	--	--	--	--	0.016	999.999	Pass
CA	4,000 miles	California LEV-III ULEV50	NMOG+NOX	0.0217	--	--	--	--	--	0.022	0.100	Pass
CA	4,000 miles	California LEV-III ULEV50	NOX	0.0058	--	--	--	--	--	0.006	999.999	Pass

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV

Test #	**NFMX10073254**	**Test Procedure**	**11 - Cold CO**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	28 - Cold CO E10 Regular Gasoline (Tier 3)
Test Date	11/19/2021	**Fuel**	Gasoline
Fuel Batch ID	375-B	**Fuel Calibration Number**	39
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**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	3845	**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)	678.90411	--
FE BAG 1 (Bag 1 Fuel Economy)	12.71021	12.71021
CO2 BAG 2 (Bag 2 Carbon Dioxide)	527.78097	--
FE BAG 2 (Bag 2 Fuel Economy)	16.48169	16.48169
CO2 BAG 3 (Bag 3 Carbon Dioxide)	504.07392	--
FE BAG 3 (Bag 3 Fuel Economy)	17.26398	17.26398
METHANE (CH4 - Methane)	0.01663	--
CO (Carbon Monoxide)	0.75254	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	2.13219	--
DT-EER (Drive Trace Energy Economy Rating)	0.379174	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	3.25067	--
MFR FE (Manufacturer Fuel Economy)	15.70279	15.70279
NOX (Nitrogen Oxide)	0.01106	--
HC-NM (Non-methane Hydrocarbon)	0.0727255	--
NMOG (Non-methane organic gases)	0.07992	--
HC-TOTAL (Total Hydrocarbon)	0.08926	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	552.59632	--

Manufacturer Test Comments NMOG = 1.1 * NMHCr

Certification Summary Information Report

Test Group TFMXT03.03V7 **Evaporative/Refueling Family** TFMXR0140NDV

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 50	CO	0.75	--	--	--	0.04	--	0.8	12.5	Pass
Fed	120,000 miles	Federal Tier 3 Bin 50	HC-NM	0.07	--	--	--	0.0069	--	0.1	0.4	Pass
CA	50,000 miles	California LEV-III ULEV50	CO	0.75	--	--	--	0.04	--	0.8	12.5	Pass

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV

Test #	**NFMX10073256**	**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	11/10/2021	**Fuel**	Gasoline
Fuel Batch ID	373-B	**Fuel Calibration Number**	61
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**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	3779	**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)	0.00056	--
CO (Carbon Monoxide)	0.06775	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	1.41557	--
DT-EER (Drive Trace Energy Economy Rating)	-0.0626554	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	2.20548	--
HCHO (Formaldehyde)	0	--
MFR FE (Manufacturer Fuel Economy)	21.96239	21.96239
NOX (Nitrogen Oxide)	0.0065	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0.0001263	--
NMOG (Non-methane organic gases)	0.00017	--
HC-TOTAL (Total Hydrocarbon)	0.00064	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	394	999
Optional Carbon-Related Exhaust Emissions	394	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	393.64375	--

Manufacturer Test Comments NMOG = 1.03 * NMHCr

Certification Summary Information Report

Test Group TFMXT03.03V7 **Evaporative/Refueling Family** TFMXR0140NDV

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 50	CREE	999	--	--	--	0.2	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 50	NMOG	0.0002	--	1.03	--	0.0095	--	0.010	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NMOG+NOX	0.0067	--	--	--	--	--	0.025	0.050	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NOX	0.0065	--	--	--	0.0092	--	0.016	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	OPT-CREE	999	--	--	--	0.3	--	999	--	--
CA	150,000 miles	California LEV-III ULEV50	NMOG	0.0002	--	1.03	--	0.0095	--	0.010	999.999	Pass
CA	150,000 miles	California LEV-III ULEV50	NMOG+NOX	0.0067	--	--	--	--	--	0.025	0.050	Pass
CA	150,000 miles	California LEV-III ULEV50	NOX	0.0065	--	--	--	0.0092	--	0.016	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	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV

Test #	**NFMX10073250**	**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	11/10/2021	**Fuel**	Gasoline
Fuel Batch ID	373-B	**Fuel Calibration Number**	61
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**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	3801	**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)	855.00911	--
FE BAG 1 (Bag 1 Fuel Economy)	10.1173	10.1173
CO2 BAG 2 (Bag 2 Carbon Dioxide)	541.16255	--
FE BAG 2 (Bag 2 Fuel Economy)	15.98959	15.98959
METHANE (CH4 - Methane)	0.00269	--
CO (Carbon Monoxide)	0.2232	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.27188	--
DT-EER (Drive Trace Energy Economy Rating)	-0.967352	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.42506	--
HCHO (Formaldehyde)	0	--
MFR FE (Manufacturer Fuel Economy)	14.15776	14.15776
NOX (Nitrogen Oxide)	0.08073	--
HC-NM (Non-methane Hydrocarbon)	0.0053775	--
NMOG (Non-methane organic gases)	0.00536	--
PM (Particulate Matter)	0.0016396	--
HC-NM+NOX (SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03)	0.0861075	--
HC-TOTAL (Total Hydrocarbon)	0.00789	--

Certification Summary Information Report

Test Group TFMXT03.03V7 **Evaporative/Refueling Family** TFMXR0140NDV

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	610.92174	--

Manufacturer Test Comments NMOG = 1.03 * NMHCr

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NMHC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Bin 50	PM	0.0016	--	--	--	0	--	0.002	0.006	Pass
CA	150,000 miles	California LEV-III ULEV50	PM	0.0016	--	--	--	0	--	0.002	0.006	Pass

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV

Test #	**NFMX10073255**	**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	11/12/2021	**Fuel**	N/A
Fuel Batch ID	373-B	**Fuel Calibration Number**	61
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	3828	**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)
CO (Carbon Monoxide)	0.51421	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.71285	--
DT-EER (Drive Trace Energy Economy Rating)	-1.10154	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.77711	--
HCHO (Formaldehyde)	0	--
MFR FE (Manufacturer Fuel Economy)	14.05589	14.05589
NOX (Nitrogen Oxide)	0.00433	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--
HC-NM+NOX (SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03)	0.00433	--
HC-TOTAL (Total Hydrocarbon)	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	614.81528	--

Manufacturer Test Comments NMOG = 1.03 * NMHCr

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV

Emission Data Vehicle Information

Vehicle ID / Configuration	RRD1-3.0-J-731 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	RFMXT03.03V7	**Original Evaporative/Refueling Family**	RFMXR0140NDV
Original Test Vehicle Model Year	2024		

Vehicle Model

Represented Test Vehicle Make	Ford	**Represented Test Vehicle Model**	RANGER RAPTOR 4WD

Leak Family Details

Leak Family Identifier	001	**Leak Family Name**	RFMXR0140NDV-001

Drive Sources and Fuel System Details

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	RTRDDDNA00	**Rated Horsepower**	400
Displacement (liters)	3		
Air Aspiration Method	Turbocharged	**Air Aspiration Method, if 'Other'**	
Number of Air Aspiration Devices	2	**Air Aspiration Device Configuration**	Parallel
Charge Air Cooler Type	Air	**Drive Mode While Testing**	2-Wheel Drive, Rear
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	4,000 (mi)
Curb Weight (lbs)	5379	**Equivalent Test Weight (pounds)**	5500
GVWR (lbs)	6790	**N/V Ratio**	28.8
Axle Ratio	4.27		
Transmission Type	Semi-Automatic	**# of Transmission Gears**	10
Transmission Lockup	Yes	**Creeper Gear**	No

Dynamometer Coefficients:

	Target Coefficients			Set Coefficients			
Coefficient Category	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**A (lbf)**	**B (lbf/mph)**	**C (lbf/mph**2)**	**EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients**
City/Highway/Evap	56.19	0.2099	0.04199	24.87	0.2935	0.03839	22.9

Emission Control Device Comments T3B50/ULEV50,SFTP-0.060, PM3, CB4, T3e/L3e

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV
Manufacturer Test Vehicle Comments	RANGER RAPTOR (P703) 3.0L GTDI 4X4		

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV

Test #	**RFMX10079452**	**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	03/15/2023	**Fuel**	N/A
Fuel Batch ID	373-B	**Fuel Calibration Number**	77
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	APTL		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4039	**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**	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	500.464	--
FE BAG 1 (Bag 1 Fuel Economy)	17.3973126	17.3973126
CO2 BAG 2 (Bag 2 Carbon Dioxide)	457.727	--
FE BAG 2 (Bag 2 Fuel Economy)	19.0385713	19.0385713
CO2 BAG 3 (Bag 3 Carbon Dioxide)	442.958	--
FE BAG 3 (Bag 3 Fuel Economy)	19.6875327	19.6875327
METHANE (CH4 - Methane)	0.0034195	--
CO (Carbon Monoxide)	0.250842	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.0810646	--
DT-EER (Drive Trace Energy Economy Rating)	-0.260245	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.256679	--
MFR FE (Manufacturer Fuel Economy)	18.8241643	18.8241643
NOX (Nitrogen Oxide)	0.0041518	--
N2O (Nitrous Oxide)	0.000119	--
HC-NM (Non-methane Hydrocarbon)	0.0079703	--
NMOG (Non-methane organic gases)	0.0082891	--
PM (Particulate Matter)	0.0014351	--
HC-TOTAL (Total Hydrocarbon)	0.011163	--

Certification Summary Information Report

Test Group	TFMXT03.03V7	Evaporative/Refueling Family	TFMXR0140NDV

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	463	999
Optional Carbon-Related Exhaust Emissions	464	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	462.518	--

Manufacturer Test Comments NMOG = 1.04 * NMHCr

Test #	**RFMX10079453**	**Test Procedure**	**23 - 2-day evap**
Exhaust Test # for this Evap Test	RFMX10079452	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	12/16/2022	**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	3789	**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**	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
OMHCE (Organic material Hydrocarbon Equivalent)	0.2031	--
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.2031	--

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	0.2031	0.0000	0.203	0.500	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	OMHCE	0.2031	0.0000	0.203	0.500	Pass

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV

Test #	**RFMX10079533**	**Test Procedure**	**34 - Federal fuel 3-day evap**
Exhaust Test # for this Evap Test	RFMX10079452	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/03/2023	**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	3995	**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**	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
OMHCE (Organic material Hydrocarbon Equivalent)	0.1909	--
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.1909	--

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	0.1909	0.0000	0.191	0.500	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	OMHCE	0.1909	0.0000	0.191	0.500	Pass

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV

Test #	**RFMX10079534**	**Test Procedure**	**32 - Federal Fuel Running Loss**
Exhaust Test # for this Evap Test	RFMX10079452	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/03/2023	**Fuel**	Gasoline
Fuel Batch ID	373-B	**Fuel Calibration Number**	77
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	4006	**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**	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	0.000	0.00	0.05	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	OMHCE	0.000	0.000	0.00	0.01	Pass

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV

Test #	**RFMX10079535**	**Test Procedure**	**24 - Federal fuel refueling test (ORVR)**
Exhaust Test # for this Evap Test	RFMX10079452	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/03/2023	**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	3995	**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**	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
OMHCE (Organic material Hydrocarbon Equivalent)	0.017	--
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.017	--

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	0.017	0.001	0.02	0.20	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	OMHCE	0.017	0.001	0.02	0.20	Pass

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV

Fuel Properties

Fuel Batch ID	**373-B**	**Fuel Calibration Number**	**77**
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	01/27/2023
Fuel Batch Calibration Effective Date	01/27/2023	**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**	0.752
Fuel Ethanol Volume Percent (%)	9.8	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17928
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.828	**Weight Fraction CO2**	--

Fuel Batch ID	**373-B**	**Fuel Calibration Number**	**61**
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	07/29/2021
Fuel Batch Calibration Effective Date	07/29/2021	**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**	0.752
Fuel Ethanol Volume Percent (%)	9.6	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17929
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.833	**Weight Fraction CO2**	--

Fuel Batch ID	**375-B**	**Fuel Calibration Number**	**39**
Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)	**Fuel Batch Calibration Date**	11/02/2021
Fuel Batch Calibration Effective Date	11/02/2021	**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**	0.744
Fuel Ethanol Volume Percent (%)	9.7	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17857
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.83	**Weight Fraction CO2**	--

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV

Consolidated List of Standards

Exhaust Standards

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Both
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	California LEV-III ULEV50
Fuel	Gasoline	**Test Procedure**	Cold CO

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
50,000 miles	CO	--	--	--	--	--	--	0.04	12.5

Cert Region	Federal	**Cert/In-Use Code**	Both
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	Federal Tier 3 Bin 50
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	--	--	--	--	--	--	0.2	999.999
150,000 miles	NMOG	--	--	1.03	--	--	--	0.0095	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0187	0.050
150,000 miles	NOX	--	--	--	--	--	--	0.0092	999.999
150,000 miles	OPT-CREE	--	--	--	--	--	--	0.3	999.999

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV
Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Both
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	California LEV-III ULEV50
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	--	--	--	--	--	--	0.13	1.7
150,000 miles	CO-COMP	--	--	--	--	--	--	--	4.2
150,000 miles	HCHO	--	--	--	--	--	--	0	0.004
150,000 miles	NMOG	--	--	1.1	--	--	--	0.0095	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0187	0.050
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	--	0.090
150,000 miles	NOX	--	--	--	--	--	--	0.0092	999.999
150,000 miles	PM	--	--	--	--	--	--	0	0.003

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Both
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	California LEV-III ULEV50
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	--	--	--	0.0095	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0187	0.050
150,000 miles	NOX	--	--	--	--	--	--	0.0092	999.999

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV
Cert Region	Federal	**Cert/In-Use Code**	Both
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	Federal Tier 3 Bin 50
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	--	--	--	--	--	--	0.13	1.7
150,000 miles	CO-COMP	--	--	--	--	--	--	--	4.2
150,000 miles	CREE	--	--	--	--	--	--	0.2	999.999
150,000 miles	HCHO	--	--	--	--	--	--	0	0.004
150,000 miles	METHANE	--	--	--	--	--	--	0.002	0.030
150,000 miles	N2O	--	--	--	--	--	--	0.003	0.010
150,000 miles	NMOG	--	--	1.1	--	--	--	0.0095	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	--	0.0187	0.050
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	--	0.090
150,000 miles	NOX	--	--	--	--	--	--	0.0092	999.999
150,000 miles	OPT-CREE	--	--	--	--	--	--	0.3	999.999
150,000 miles	PM	--	--	--	--	--	--	0	0.003

Cert Region	Federal	**Cert/In-Use Code**	Both
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	Federal Tier 3 Bin 50
Fuel	Gasoline	**Test Procedure**	Cold CO

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
50,000 miles	CO	--	--	--	--	--	--	0.04	12.5
120,000 miles	HC-NM	--	--	--	--	--	--	0.0069	0.4

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV
Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Both
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	California LEV-III ULEV50
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	NMOG	--	--	1.03	--	--	--	--	999.999
150,000 miles	NOX	--	--	--	--	--	--	--	999.999
150,000 miles	PM	--	--	--	--	--	--	0	0.006

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Both
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	California LEV-III ULEV50
Fuel	Gasoline	**Test Procedure**	Fed. fuel 50 F exh.

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
4,000 miles	CO	--	--	--	--	--	--	--	1.7
4,000 miles	HCHO	--	--	--	--	--	--	--	0.016
4,000 miles	NMOG	--	--	--	--	--	--	--	999.999
4,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.100
4,000 miles	NOX	--	--	--	--	--	--	--	999.999

Cert Region	Federal	**Cert/In-Use Code**	Both
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**Standard Level**	Federal Tier 3 Bin 50
Fuel	Gasoline	**Test Procedure**	US06

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	--	999.999
150,000 miles	NMOG	--	--	1.03	--	--	--	--	999.999
150,000 miles	NOX	--	--	--	--	--	--	--	999.999
150,000 miles	PM	--	--	--	--	--	--	0	0.006

Evaporative/Refueling Standards

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV

Evaporative/Refueling Family	TFMXR0140NDV	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Both	**Standard Level**	California LEV-IV 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	0.001

Evaporative/Refueling Family	TFMXR0140NDV	**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	0.001

Evaporative/Refueling Family	TFMXR0140NDV	**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	0.000

Evaporative/Refueling Family	TFMXR0140NDV	**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	--	0.500	0.0000

Evaporative/Refueling Family	TFMXR0140NDV	**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	--	0.020	0

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV

Evaporative/Refueling Family	TFMXR0140NDV	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Both	**Standard Level**	California LEV-IV Zero Evap (Option 2)
Test Procedure	2-day evap		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	OMHCE	--	0.500	0.0000

Evaporative/Refueling Family	TFMXR0140NDV	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Both	**Standard Level**	California LEV-IV 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	--	0.01	0.000

Evaporative/Refueling Family	TFMXR0140NDV	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Both	**Standard Level**	California LEV-IV 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	--	0.500	0.0000

Evaporative/Refueling Family	TFMXR0140NDV	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Both	**Standard Level**	California LEV-IV Zero Evap (Option 2)
Test Procedure	Evap Canister Bleed Test		

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

Evaporative/Refueling Family	TFMXR0140NDV	**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	--	0.500	0.0000

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV

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

Certification Region

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV
CA	California + CAA Section 177 states	FA	Federal

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

Certification Summary Information Report

Test Group	TFMXT03.03V7	**Evaporative/Refueling Family**	TFMXR0140NDV
L3SULEV170	California LEV-III SULEV170	L4ULEV200	California LEV-IV ULEV200
L3SULEV150	California LEV-III SULEV150	L4ULEV250	California LEV-IV ULEV250
L3LEV630	California LEV-III LEV630	L4ULEV270	California LEV-IV ULEV270
L3ULEV570	California LEV-III ULEV570	L4ULEV40	California LEV-IV ULEV40
L3ULEV400	California LEV-III ULEV400	L4ULEV400	California LEV-IV ULEV400
L3ULEV270	California LEV-III ULEV270	L4ULEV50	California LEV-IV ULEV50
L3SULEV230	California LEV-III SULEV230	L4ULEV60	California LEV-IV ULEV60
L3SULEV200	California LEV-III SULEV200	L4ULEV70	California LEV-IV ULEV70

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
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 TFMXT03.03V7

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 16.05.00 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.

SECTION 12

Description of Vehicles Covered by Certificate and Testing Parameters

12.00.01.00 Common Family Parameters

Test Group: TFMXT03.03V7

Test Group Information Bronco Raptor	
Vehicle/Engine Class	LDT4
Vehicle Fuel Category	Single Fuel
Operating Fuel 1	Gasoline
Operating Fuel 2	N/A
Engine Displacement (liters)	3.0
SAE net HP @ RPM (97 Ron)	418 @ 5750 RPM
SAE net torque ft-lb @ RPM	440 @ 2750 RPM
VECI - Emission Control System	
Air Aspiration Method	Turbocharged
Charge Air Cooler Type	Air
Exhaust Gas Recirculation (EGR)	No
Cooled EGR	No
Air injection Type (AIR)	Not Applicable
After-Treatment Type	Three-way catalyst
Fuel Metering System 1	Spark Ignition Direct fuel injection
Fuel Metering System 2	N/A
Heated oxygen sensor (HO_2S)	Yes
Heated Air/Fuel Sensor or WR oxygen sensor (AFS/WR-HO_2S)	Yes
Feedback Sensor Configuration	2WR-HO2S, 2HO2S
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

12.00.01.00 Common Family Parameters

Test Group: TFMXT03.03V7

Test Group Information Ranger Raptor	
Vehicle/Engine Class	LDT4
Vehicle Fuel Category	Single Fuel
Operating Fuel 1	Gasoline
Operating Fuel 2	N/A
Engine Displacement (liters)	3.0
SAE net HP @ RPM (97 Ron)	405 @ 5750 RPM
SAE net torque ft-lb @ RPM	430 @ 4500 RPM
VECI - Emission Control System	
Air Aspiration Method	Turbocharged
Charge Air Cooler Type	Air
Exhaust Gas Recirculation (EGR)	No
Cooled EGR	No
Air injection Type (AIR)	Not Applicable
After-Treatment Type	Three-way catalyst
Fuel Metering System 1	Spark Ignition Direct fuel injection
Fuel Metering System 2	N/A
Heated oxygen sensor (HO_2S)	Yes
Heated Air/Fuel Sensor or WR oxygen sensor (AFS/WR-HO_2S)	Yes
Feedback Sensor Configuration	2WR-HO2S, 2HO2S
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

Exhaust Calibration	Certification Code	Evaporative Calibration	Application	Transmission	Leak Check	Vehicle
TTRDDDNA06	TTRDDDNA0001	TFMXR0140NDV	50 States	A/T	0.020	Ranger Raptor 4WD
TTG1DDNB06	TTG1DDNB0001	TFMXR0140NDG	50 States	A/T	0.020	Bronco Raptor 4WD

Reference Specifications		
Spark Plug	Type: CYFS-12YRT3 Gap: 0.8 +0/-0.1 mm	
Ignition Timing ^{O}BTDC (No SPOUT connector)	PCM Controlled	
Idle RPM	PCM Controlled	
Target (Base) in Drive (A/C OFF/A/C ON)	A/T: 625/625 rpm	Special conditions which may require idle speeds higher than base are listed below. (See Section 16.05 for descriptions of these strategies):

Potential Idle/Drive Speed Modifier	Function Utilized (Y/N)	Purpose
A/C Operation	Y	Compressor performance
Low or high air charge temperature	Y	Heater, A/C or engine cooling performance
Low catalyst temperature	Y	Achieve 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	Y	Preserve battery life and avoid low voltage
High-speed fan operation	N	For engine and A/C condenser cooling
Extended neutral idle time	Y	Maintain catalyst temperature
Power steering pressure	N	Ensure adequate P/S assistance
Power steering position	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

Emission Component	Sensed Parameter	Controlled Parameter	Justification[1]	Calibration
ELECTRONICS – PCM[2]				
FUEL				
Fuel Injector	Signal from PCM	Fuel Flow	N/A	Static Flow Rate: 18.0 +/- 0.58 cc/sec
Regulated Fuel Pressure	Signal from PCM	Fuel Pressure	N/A	N/A MRFS
Fuel Pump	Signal from PCM	Fuel Flow	N/A	Nom. Flow Rate: 235 L/H @500kpa-12V
Torque Based Electronic Throttle Control	Signal from PCM	None	Operates in FTP	Throttle Diameter: 60.015 mm
Fuel System Control Strategy[2]				
Open loop 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 "FN1360"* and the entry conditions in function "FN311" or "FN337C" (MultiCore-OL_LAM_PWR_ENR_MIN_M)
Open Loop Delay Timers	Time and Gear	Delay open loop fuel	Allows time for downshift; limit	See Section 16.00.05.00 for delay time calibration "FN1311" or "HLDTM2" and

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

			enrichment to unusual conditions	the maximum open-loop count-up time, "OL_DELAYMAX" (Multicore-OL_TM_PWR_DLY_A_M)
Open Loop Enrichment 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" or "CAT_MAX_LO" and "CAT_MAX_HI" and the time delay on CAT_MAX_LO," "CAT_TMR_THRES"
Open Loop Enrichment EGO Protection	Inferred Oxygen Sensor Temperature	Air-Fuel Ratio (LAMBSE)	Protection against damage	See Section 16.00.05.00 for inferred EGO temperature to trigger enrichment, "FEGO_MAX"
Open Loop Enrichment 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" or "FLN_MAX_LO" and "FLN_MAX_HI" and the time delay on FLN_MAX_LO," "FLN_TMR_THRES"
Open Loop Enrichment following Decelration 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" and "OL_LAM_SSTRT_CALRC_T"
CRANKCASE				
PCV Valve	Manifold Vacuum	Air Flow to Engine	Operates in FTP	EV#:290 2.55 - 3.75 SCFM @ 3" Hg 2.00 - 3.20 SCFM @ 8" Hg 0.85 - 1.65 SCFM @ 15" Hg
EGR – N/A				

Emission Component	Sensed Parameter	Controlled Parameter	Justification[1]	Calibration
VCT Control Strategy				
Cam timing based on requested torque and percent torque	Requested Torque, Percent Torque, Engine Speed, and Load	Cam Phase Timing	VCT optimized for fuel efficiency within constraints of combustion stability, driveability, emissions, and vacuum limitations	See Section 16.00.05.00 for "FNCAMTQ_IMRC"* or "FN5520_TQ"*, or "FN5520_LOAD"* (Multicore-FNHDFX_BEST_DRIVE_DIST and FNHDFX_BEST_FE_DIST)
Cam Timing Limitation for Combustion Stability	Requested Torque and Engine Speed	Cam Phase Timing	Protection against damage or accident	See Section 16.00.05.00 for "FN5520A1_TQ"
Cam Actuator Limitation for Oil Temperature	Oil Temperature; or Time-since-start and ECT-at-start	Cam Phase Timing	Protection against damage or accident	See Section 16.00.05.00 for "FNEOTB" (Multicore-FNHDFX_FNEOT_EXH)
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 "FN556" (Muilticore-FNHDFX_VCT_COMB_STAB_EXH and FNHDFX_VCT_COMB_STAB_INT)
Cam Retard Limitation under Hi Torque Demand	Engine Speed and Requested Torque	Cam Phase Timing or Throttle Position	Protection against damage or accident under high torque demand	See Section 16.00.05.00 for "FN5521A" or "FN5521A_PTC" (Multicore-FNHDFX_OP_LIM_EXH)
Cam Actuator Limitation for ACT Effects	Air Charge Temperature	Cam Phase Timing	Protection against damage or accident by maintaining combustion stability	See Section 16.00.05.00 for "FN552A" (Multicore-FNHDFX_VCTLIM_EXH)
ENGINE COOLING				
Thermostat	Coolant Temperature	Coolant Flow	Engine Protection	Start to Open: 87° 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

SECTION 12

Description of Vehicles Covered by Certificate

and

Testing Parameters

2026 MY Exhaust Emissions Parts List
Test Group: TFMXT03.03V7

Carline Name	Certification Level	Cert Code	Calibration(s)	PCM Assembly Part#	PCM Calibration Assembly Part#	Date
BRONCO RAPTOR 4WD	Initial	TTG1DDNB0001	TTG1DDNB06	PTB3A-12A650-VB	PTB3A-12A650-VB	09/10/2025
RANGER RAPTOR 4WD	Initial	TTRDDDNA0001	TTRDDDNA06	PTB3A-12A650-YB	PTB3A-12A650-YB	09/10/2025

ALL OTHER EXHAUST EMISSION PARTS

Engine Family: TFMXT03.03V7

2026MY3.0L

Part Name		Part Number	
Cam Cover & Gskt Assembly		N2DE-6K271-AD	
Camshaft Position Sensor Assembly		RL3A-12K073-AB	
Catalyst		MB3G-5E212-EF	
		MB3G-5E214-ED	
		NB3V-5E212-BD	(Alt)
		NB3V-5E212-BE	(Alt)
		NB3V-5E214-BD	(Alt)
Crank Position Sensor		FT4A-6C315-BB	
Cylinder Head Temp Sensor		P2GA-6G004-AC	
Electronic Throttle Body		JT4E-9F991-AA	
Engine Coolant Temperature Sensor		JL3A-12A648-AA	
Fuel Injector (DI)		N2DE-9G929-AA	
Fuel Pressure Sensor (High Pressure)		KT4E-9F972-AA	
Fuel Pressure Sensor (Low Pressure)		KT4E-9F972-AA	
Heated Air/Fuel Sensor (WR-HO2S)		MB3G-9Y460-88	
Heated Oxygen Sensor (CMS)		MB3G-9G444-BB	
		M83G-9G444-BC	(Alt)
		MB3G-9G444-CB	(Alt)
Knock Sensor		FT4A-12A699-BG	
		FT4A-12A699-BH	(Alt)
Manifold Absolute Pressure Sensor		PV4A-9F479-BA	
PCV Valve		KR3E-6A666-BA	
Spark Plug - Not Reportable Use For 12.02 Heat Range & Gap		ML3E-12405-F A	
Thermostat - Not Reportable Use For 12.02 STO Temp		BR3E-8575-EB	
Turbo Charger	(LH)	N2DE-6C879-AE	
	(RH)	N2DE-6K682-AE	
VCT Solenoid		FT4E-68297-BB	
Fuel Pump Low Pressure		ML34-9350-AA	
Intake Air Temperature Sensor (IAT)		OS?A-12A697-AA	

2026 TEST VEHICLE REQUIREMENTS

	Evaporative Emission Vehicle	Evaporative Emission Vehicle	Evaporative Emission Vehicle	Evaporative Emission Vehicle
Test Group	NFMXT02.31EM	MFMXT02.31EM	RFMXT03.03V7	RFMXT03.03V7
Evap Emission Family	NFMXR0140NDG	MFMXR0140NDG	RFMXR0140NDV	RFMXR0140NDV
Displacement	2.3L	2.3L	3L	3L
Engine Code	MTG1N3NB00	MTG1N3NB00	RTRDDDNA00	RTRDDDNA05
Fuel Tank Capacity	22.2 Gal	22.2 Gal	21.7 Gal	21.7 Gal
Exhaust Control System	2TWC, HO2S, WR-HO2S, TC, CAC, DFI, EGR, EGRC	2TWC, HO2S, WR-HO2S, TC, CAC, DFI, EGR, EGRC	DFI/HO2S/TWC/TC/WR-HO2S/CAC	DFI/HO2S/TWC/TC/WR-HO2S/CAC
Model	Bronco	Bronco	RANGER RAPTOR 4WD	RANGER RAPTOR 4WD
Transmission	Semi-Auto-10	Semi-Auto-10	Semi-Auto-10	Semi-Auto-10
Equivalent Test Weight	5500.0	5500.0	5500.0	5500.0
Curb Weight	5136.0	5136.0	5379.0	5379.0
GVWR	6120.0	6120.0	6790.0	6790.0
THP/DPA	26 / f0=44.07, f1=0.6921, f2=0.04663	27.5 / f0=51.84, f1=0.6755, f2=0.04816	22.9 / f0=56.19, f1=0.2099, f2=0.04199	22.9 / f0=56.19, f1=0.2099, f2=0.04199
Axle Ratio	4.7	4.7	4.27	4.27
N/V Ratio - RPM/MPH	30.2	30.2	28.8	28.8
Tires	LT315/70R17	LT315/70R17	P285/70R17	P285/70R17
Vehicle ID No	301W321	MG11-2.3-J-203	RRD1-3.0-J-731	318W879
Configuration Number	0	0	0	0
Model Year	2022	2021	2024	2024

2026 TEST VEHICLE REQUIREMENTS

	Exhaust Emission Vehicle
Test Group	NFMXT03.03V7
Evap Emission Family	NFMXR0140NDG
Displacement	3L
Engine Code	NTG1DDNB02
Fuel Tank Capacity	22.0 Gal
Exhaust Control System	2WR-HO2S, 2HO2S
Model	BRONCO RAPTOR 4WD
Transmission	Semi-Auto-10
Equivalent Test Weight	6000.0
Curb Weight	5725.0
GVWR	6850.0
THP/DPA	25.6 / f0=47.73, f1=0.4815, f2=0.04793
Axle Ratio	4.7
N/V Ratio - RPM/MPH	28.2
Tires	LT315/80R17
Vehicle ID No	NG11-3.0-J-509
Configuration Number	0
Model Year	2022

Vehicle Description Report

Test Group: TFMXT03.03V7

ID Number	5292998
Displacement	3.0
Cert Code	TTG1DDNB0001
Fuel Tank(s)	B2
Carline	BRONCO RAPTOR 4WD
Wheel Configuration	Standard
Body Style	4 Door
Wheelbase	116.0
Transcode Combo	ETD
Curb Weight	5774
ETW	6000
Loaded Weight LVW	6074
ALVW-ETW	6500
Adj. Loaded Weight	6312
GVWR	6850
GCWR	10650
Min Axle Ratio	4.7
Max Axle Ratio	4.7
Min N/V Ratio	28.2
Max N/V Ratio	28.2
Emission Vehicle Class	LDT4
Drive Code	Part-time 4-Wheel Drive
Trans Type	Semi-Automatic
Calibration Application	50ST
Min Tire Size	315/80R17 - 28.2
Max Tire Size	315/80R17 - 28.2
Alt Tire 1	
Alt Tire 2	
Alt Tire 3	
Alt Tire 4	
Alt Tire 5	
Alt Tire 6	
Alt Tire 7	
DAW Full Tank	2554
DAW Empty Tank	2467

Vehicle Description Report

Test Group: TFMXT03.03V7

ID Number	5292986
Displacement	3.0
Cert Code	TTRDDDNA0001
Fuel Tank(s)	RR
Carline	RANGER RAPTOR 4WD
Wheel Configuration	Standard
Body Style	Crew Cab
Wheelbase	128.7
Transcode Combo	ETD
Curb Weight	5363
ETW	5500
Loaded Weight LVW	5663
ALVW-ETW	6000
Adj. Loaded Weight	6077
GVWR	6790
GCWR	11465
Min Axle Ratio	4.27
Max Axle Ratio	4.27
Min N/V Ratio	28.8
Max N/V Ratio	28.8
Emission Vehicle Class	LDT4
Drive Code	Part-time 4-Wheel Drive
Trans Type	Semi-Automatic
Calibration Application	50ST
Min Tire Size	LT285/70R17 - 28.8
Max Tire Size	LT285/70R17 - 28.8
Alt Tire 1	
Alt Tire 2	
Alt Tire 3	
Alt Tire 4	
Alt Tire 5	
Alt Tire 6	
Alt Tire 7	
DAW Full Tank	2375
DAW Empty Tank	2280

SECTION 14

Request for Certification

Emissions Certification,
Homologation, & Compliance

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

September 25, 2025

Ms. Hannah Frame
Certification Division
Mobile Source Pollution Control
U. S. Environemental Protection Agency
2000 Traverwood Drive
Ann Arbor, Michigan 48105

Dear Ms. Frame:

Ford Motor Company (Ford) herewith submits its Part I Application for Certification for 2026 model year gasoline powered light-duty trucks (LDTs) contained in Ford's 50 States test group TFMXT03.03V7 and evaporative emission families TFMXR0140NDV and TFMXR0140NDG. Tier 3 E10 regular fuel was used for Evaporative emission testing. This test group is being certified to the federal T3B50 standards and is counted as LEVIII / ULEV50 under the California standards.

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

Certification & In-Use FTP Standards (g/mi)	**Useful Life**	**NMOG + NOx** (g/mi)	**CO** (g/mi)	**N2O** (g/mi)	**HCHO** (g/mi)	**CH4** (g/mi)	**PM** (g/mi)
Tier 3 Bin 50	150K	0.050	1.7	0.010	0.004	0.030	0.003

In addition, this test group also meets the Cold NMHC Family Emission Limit (FEL) of 0.4 g/mi as part of compliance plan to meet corporate fleet average Cold NMHC standards. In addition, this test group meets the Cold CO standard of 12.5 g/mi. This test group also meets the SFTP NMOG+NOx Family Emission Limit (FEL) of 0.090 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 and In-Use Evaporative Standards	**Useful Life**	**Hot Soak + 2-day diurnal**	**Hot Soak + 3-day diurnal**	**Running Loss**	**ORVR**	**Canister Bleed Test**
T3e	150K	0.500 grams per test (LDT)	0.500 grams per test (LDT)	0.05 gram/mile	0.20 gram/gallon	0.020 g/test

The Fuel Spitback 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 LDV test group listed in this Application for Certification.

Please contact Nabil Hachem at 313-690-0030, Email nhachme1@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

September 25, 2025

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 2026 model year gasoline powered light-duty trucks (LDTs) contained in Ford's 50 states test group TFMXT03.03V7 and evaporative emission families TFMXR0140NDV and TFMXR0140NDG. Tier 3 E10 regular fuel was used for Evaporative emission testing. This test group is being certified to the federal T3B50 standards and is counted as LEVIII / ULEV50 under the California standards. This application aligns with CARB's Manufacturers Advisory Correspondence (MAC) ECCD-2025-8 alternate pathway (1) described on page 2 as follows:

(1) An approved application for CARB certification to the vehicle and engine emission regulations that immediately preceded those covered by the waivers that were targeted by the congressional resolutions.

Ford intends submittal of this certification to facilitate CARB's review in order to ensure timely certification of Ford's vehicles as may be needed in accordance with applicable requirements. Ford is reserving its rights with regard to determining what requirements apply and which requirements can be enforced by CARB.

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

Certification & In-Use FTP Standards (g/mi)	Useful Life	NMOG + NOx	CO	HCHO	PM
LEV III ULEV 50	150K	0.050	1.7	0.004	0.003

This test group also meets the SFTP NMOG+NOx Family Emission Limit (FEL) of 0.090 g/mi and CO composite limit of 4.2 g/mi as part of compliance plan to meet corporate fleet average SFTP standards. In addition, this test group meets the Cold CO standard of 12.5 g/mi.

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

Certification and In-Use Evaporative Standards	Useful Life	Hot Soak + 2-day diurnal	Hot Soak + 3-day diurnal	Running Loss	ORVR	Canister Bleed Test
L3e	150K	0.500 grams per test (LDT)	0.500 grams per test (LDT)	0.05 gram/mile	0.20 gram/gallon	0.020 g/test

The Fuel Spitback 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 Nabil Hachem 313-690-0030, Email nhachem1@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: R. Uyehara
M.Desai

SECTION 15

Other Information

SAP Manual Payment Request
(North America)

REF NO: 306180

NAME AND ADDRESS OF PAYEE	Employee	Ex-Employee / Board of Director	Company Code	Separate Check	Special Handling/ Instruction Key in S4
Environmental Protection Agency-MVECP				Y	
U.S. Bank - Government Lockbox 979032	Supplier Code		Due Date / Baseline Date	Currency	Amount
1300 Pennsylvania Ave NW - Washington DC 20004-3002					
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/ACH.	GXHSA		ASAP	USD	230,573.00

REASON FOR DISBURSEMENT

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

Alternate Name & Address

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

2026 MODEL YEAR CERTIFICATION FEES - (FORMS ATTACHED)

GL Account	Profit Center	Cost Center	Internal Order	Reference Key1	Reference Key2	INVOICE #	INVOICE DATE	AMOUNT (Bracket Credits)	1099 Tax Type
63044090	2000005001	1000017919				306180	7/7/2025	230,573.00	N
								-	
							TOTAL	230,573.00	

Pre-requisites for Payment :

1. Requestors or Approvers to ensure the following
   - Receipt of Service
   - Price Validation
   - Supported by invoice or other documentation
2. Uses of Manual Payment Requests
3. Corporate Approval Authorities - Method of Payment

TYPE OF INVOICE:	MANUAL PAYMENT REQUEST -PERMISSIBLE USES (use drop down with Alt+down arrow key):	Uses of Manual Payment Requests	Not in Uses of Manual Payment Request

Requestor

Preparer/Requestor — CDS ID: TOLIVER — Date: 7/7/2025

Operations Approval - Receipt of Service

Operations Approval — CDS ID: LMERRITZ — Sign: Digitally signed by Lawrence Merritt DF8ED474SEAC45B — Date: 7/7/2025

Approvals per Corporate Approval Authorities - Method of Payment

Payment item is on Uses of Manual Payment Requests

Finance LL6+ Unlimited — CDS ID: PBLANCAS — Sign: Digitally signed by Deidra Montserrat 9961ABEC83D24AA... — Date: 7/7/2025

Payment item is NOT on Uses of Manual Payment Requests

Finance LL5+ Unlimited — 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

May 2025 North American Check Request Form (Previous editions without the above fields may NOT be used)

Note: Approved forms can be sent to NAPAP@ford.com for processing

US EPA Fee Form

Help and EPA Instructions

* Required Field

General Information

Date: 06/17/2025

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 *

313-3238938

Calendar Year complete application submitted to EPA *

2025

PLEASE NOTE: These fees apply to complete certification applications received by EPA from January 1, 2025, through December 31, 2025. 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 *

TFMXT03.03V7

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

$32,939.00

Payment Type *

Offline ACH

Comments

Nabil Hachem 3.0L Ranger Raptor & Bronco Raptor

Pay.gov Tracking ID: 27P07C4P
Agency Tracking ID: 77074775330

EPA Form Number 3520-29
OMB Control No. 2060-0545
Approval expires 7/31/2027

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.

SECTION 17

California ARB Requirements

FoMoCo

Ford Motor Company
VEHICLE EMISSION CONTROL INFORMATION

Conforms to regulations: 2026 MY

U.S. EPA: T3B50 LDT4
OBD: CA OBD II **Fuel:** Gasoline

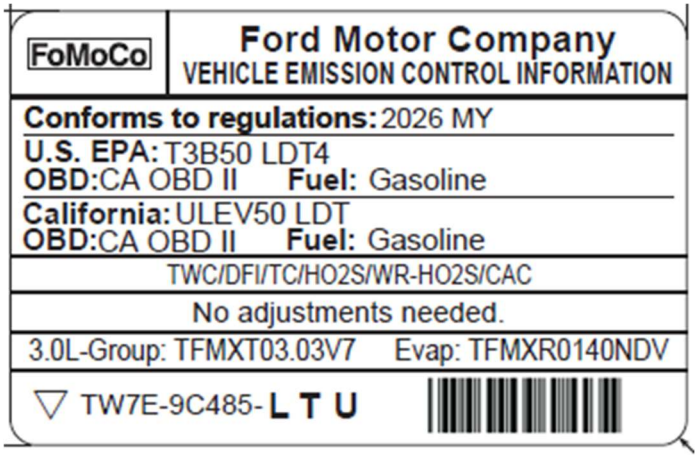
California: ULEV50 LDT
OBD: CA OBD II **Fuel:** Gasoline

TWC/DFI/TC/HO2S/WR-HO2S/CAC

No adjustments needed.

3.0L-Group: TFMXT03.03V7 Evap: TFMXR0140NDG

▽ TW7E-9C485-**L A A**


FoMoCo
Ford Motor Company
VEHICLE EMISSION CONTROL INFORMATION
Conforms to regulations: 2026 MY
U.S. EPA: T3B50 LDT4
OBD: CA OBD II Fuel: Gasoline
California: ULEV50 LDT
OBD: CA OBD II Fuel: Gasoline
TWC/DFI/TC/HO2S/WR-HO2S/CAC
No adjustments needed.
3.0L-Group: TFMXT03.03V7 Evap: TFMXR0140NDV
TW7E-9C485-L T U

SECTION 18

Revisions

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2026 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: TFMXT03.03V7-067

Effective Date: 11/24/2025

Expiration Date: 12/31/2026

Byron J. Bunker, Division Director
Compliance Division

Issue Date: 11/24/2025

Revision Date: N/A

Test Group Name: TFMXT03.03V7
Evaporative/Refueling Family Name: TFMXR0140NDG
Applicable Exhaust Emission Standards: Federal Tier 3 Bin 50
Applicable Evaporative/Refueling Standards: Federal Tier 3 Evap

Engine Displacement: 3.0 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 RAPTOR 4WD

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 2026 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, 2027. 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, 2027. 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.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2026 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: TFMXT03.03V7-068

Effective Date: 11/24/2025

Expiration Date: 12/31/2026

Byron J. Bunker, Division Director
Compliance Division

Issue Date: 11/24/2025

Revision Date: N/A

Test Group Name: TFMXT03.03V7
Evaporative/Refueling Family Name: TFMXR0140NDV
Applicable Exhaust Emission Standards: Federal Tier 3 Bin 50
Applicable Evaporative/Refueling Standards: Federal Tier 3 Evap

Engine Displacement: 3.0 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: RANGER RAPTOR 4WD

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 2026 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, 2027. 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, 2027. 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.

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 are to 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
2026	TFMXT03.03V7	LDT4	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 ULEV50	LEV3 COMPOSITE	*	*

SPECIAL FEATURES & EXHAUST EMISSION CONTROL SYSTEMS		OBD STATUS		ENGINE DISPLACEMENT (L)
1	2TWC(2), DFI, 2TC, 2HO2S, 2WR-HO2S, CAC	FULL	*	3.0
*	*	PARTIAL	ALL MODELS	
*	*			

EVAPORATIVE & REFUELING (EVAP/ORVR) FAMILY INFORMATION

EVAP / ORVR FAMILY	EVAPORATIVE STD CATEGORY	EVAP EMISSION STD VEHICLE CLASS	SPECIAL FEATURES
TFMXR0140NDG	LEV 3 OPTION2 WITH FEL	LDT4	HCT
TFMXR0140NDV	LEV 3 OPTION2 WITH FEL	LDT4	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	*	0.030	0.030	*

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.)

BE IT FURTHER RESOLVED: Manufacturer requested an Executive Order. This Executive Order certifies the test group meets the standards for which certification was requested.

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 are to 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).

BE IT FURTHER RESOLVED: The California Air Resources Board adopted emergency vehicle emissions regulations (the "Emergency Vehicle Emissions Regulation") that amend California Code of Regulations, Titles 13 and 17, and adopt new sections into California Code of Regulations, Titles 13 and 17. The amendments confirm that, until a court resolves the uncertainty created by the federal government's actions, certain antecedent regulations (displaced by Advanced Clean Cars II) remain operative (as previously adopted) with the caveat that CARB may enforce Advanced Clean Cars II, to the extent permitted by law, in the event a court of law holds invalid the resolution purporting to disapprove those waivers.

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

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

Executed on this 23rd day of December 2025.

Robin U. Lang

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)

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

	FUEL TYPE	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	0.034	0.050	0.3	1.7	*	*	0.1	4	0.001	0.003
50°F @4K	GASOLINE-TIER3 E10	0.022	0.100	0.3	1.7	*	*	0.5	16		

	FUEL TYPE	NMOG+NOx (g/mi)		CO (g/mi)	
		CERT	STD	CERT	STD
HWFET @ 50K	*	*	*		
HWFET @ UL	GASOLINE-TIER3 E10	0.025	0.050		
20°F @ 50K	COLD CO E10 REGULAR GASOLINE(TIER3)			0.8	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	*	*	2	*	*	0.050	0.4	*
		STD	*	*	6	*	*	0.050	4.2	*
		BIN						0.090		

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
TFMXR0140NDG	GASOLINE-TIER3 E10	0.373	0.500	0.500	0.338	0.500	0.500	0.00	0.05
TFMXR0140NDV	GASOLINE-TIER3 E10	0.191	0.500	0.500	0.203	0.500	0.500	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	STD
TFMXR0140NDG	GASOLINE-TIER3 E10	0.10	0.20	GASOLINE-TIER3 E10	*	*	*	*	0.015	0.020
TFMXR0140NDV	GASOLINE-TIER3 E10	0.02	0.20	GASOLINE-TIER3 E10	*	*	*	*	0.004	0.020

EFFECTIVE LEAK DIAMETER STANDARD AND CERTIFICATION LEVEL (INCHES)

EVAPORATIVE FAMILY	LEAK FAMILY	CERT	STD
TFMXR0140NDV	TFMXR0140NDV-001	*	0.02
TFMXR0140NDG	TFMXR0140NDG-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; TZEV: 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 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

2026 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	VEH CLASS	ENGINE (L)	TRANS TYPE	EVAPORATIVE FAMILY	EXH ECS	OBD
FORD	BRONCO RAPTOR 4WD	LDT4	3.0	SA10	TFMXR0140NDG	1	P
FORD	RANGER RAPTOR 4WD	LDT4	3.0	SA10	TFMXR0140NDV	1	P

Application for Certification

Part 2