

Certification Summary Information Report

Manufacturer	Ford Motor Company	Manufacturer Code	FMX
Test Group	TFMXT03.03V7	Evaporative/Refueling Family	TFMXR0140NDV
Certificate Number	TFMXT03.03V7-068	CARB Executive Order #	--
Certificate Issue Date	11/24/2025	Certificate Revision Date	--
Certificate Effective Date	11/24/2025	Conditional Certificate	No
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	02/20/2026	CAP2000 Conditional Certificate?	No
Independent Commercial Importer?	No	Alternative Fuel Converter Certificate?	No
SFTP Federal Composite Compliance Identifier	Tier 3	SFTP Tier 2 Composite CO Option	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	--		

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

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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			

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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

SFTP LEV-III Official Test Numbers			
Test Group Fuel	FTP	US06	SC03
Gasoline	NFMX10073249	NFMX10073250	NFMX10073255

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Test Group	TFMXT03.03V7	Evaporative/Refueling Family	TFMXR0140NDV
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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
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Drive Sources and Fuel System Details

Drive Source and Fuel#	Drive Source	Fuel
1	Combustion Engine	Gasoline

Hybrid Indicator	No	Multiple Fuel Combustion	--
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	--
Fuel Cell Indicator	--	Rechargeable Energy Storage System, if 'Other'	--
Rechargeable Energy Storage System	--		
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, if 'Other'	
Air Aspiration Method	Turbocharged	Air Aspiration Device Configuration	Parallel
Number of Air Aspiration Devices	2	Drive Mode While Testing	2-Wheel Drive, Rear
Charge Air Cooler Type	Air	Aged Emission Components	4,000 (mi)
Shift Indicator Light Usage	Not equipped	Equivalent Test Weight (pounds)	5500
Curb Weight (lbs)	5379	N/V Ratio	28.8
GVWR (lbs)	6790		
Axle Ratio	4.27		
Transmission Type	Semi-Automatic	# of Transmission Gears	10
Transmission Lockup	Yes	Creeper Gear	No

Dynamometer Coefficients:

Coefficient Category	Target Coefficients			Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	
City/Highway/Evap	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

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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	0.004	0	0.004	0.02	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	HC-TOTAL	0.004	0	0.004	0.02	Pass

Certification Summary Information Report

Test Group	TFMXT03.03V7	Evaporative/Refueling Family	TFMXR0140NDV
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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
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Drive Sources and Fuel System Details

Drive Source and Fuel#	Drive Source	Fuel
1	Combustion Engine	Gasoline

Hybrid Indicator	No	Multiple Fuel Combustion	--
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	--
Fuel Cell Indicator	--	Rechargeable Energy Storage System, if 'Other'	--
Rechargeable Energy Storage System	--		
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, if 'Other'	
Air Aspiration Method	Turbocharged	Air Aspiration Device Configuration	Parallel
Number of Air Aspiration Devices	2	Drive Mode While Testing	2-Wheel Drive, Rear
Charge Air Cooler Type	Air	Aged Emission Components	4,000 (mi)
Shift Indicator Light Usage	Not equipped	Equivalent Test Weight (pounds)	6000
Curb Weight (lbs)	5725	N/V Ratio	28.2
GVWR (lbs)	6850		
Axle Ratio	4.7	# of Transmission Gears	10
Transmission Type	Semi-Automatic	Creeper Gear	No
Transmission Lockup	Yes		

Certification Summary Information Report

Test Group		TFMXT03.03V7			Evaporative/Refueling Family			TFMXR0140NDV
Dynamometer Coefficients:								
		Target Coefficients			Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)		
City/Highway/Evap	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
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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 * NMHC_r

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	0.4	--	--	--	--	--	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	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	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.

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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
CA	4,000 miles	California LEV-III ULEV50	CO	0.3	--	--	--	--	--	0.3	1.7	Pass
CA	4,000 miles	California LEV-III ULEV50	HCHO	0.0005	--	--	--	--	--	0	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 * NMHC_r

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Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
Fed	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/NM HC 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	--	0.01	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	--	0.01	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
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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/NM HC 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 * NMHC_r

Certification Summary Information Report

Test Group	TFMXT03.03V7	Evaporative/Refueling Family	TFMXR0140NDV
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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
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Drive Sources and Fuel System Details

Drive Source and Fuel#	Drive Source	Fuel
1	Combustion Engine	Gasoline

Hybrid Indicator	No	Multiple Fuel Combustion	--
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	--
Fuel Cell Indicator	--	Rechargeable Energy Storage System, if 'Other'	--
Rechargeable Energy Storage System	--		
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 equipped	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:

Coefficient Category	Target Coefficients			Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	
City/Highway/Evap	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
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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	0.203	0.5	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	OMHCE	0.2031	0	0.203	0.5	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	0	0	0.05	Pass
CA	150,000 miles	California LEV-IV Zero Evap (Option 2)	OMHCE	0	0	0	0.01	Pass

Certification Summary Information Report

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
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Consolidated List of Standards

Exhaust Standards

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	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

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			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		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

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		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	

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		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	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

Evaporative/Refueling Standards

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

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	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	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

Certification Summary Information Report

Test Group		TFMXT03.03V7		Evaporative/Refueling Family		TFMXR0140NDV	
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		California + CAA Section 177 states California LEV-IV Zero Evap (Option 2)	
Cert/In-Use Code		Both		Standard Level			
Test Procedure		Federal Fuel Running Loss					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	OMHCE	--	0.01	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		
Evaporative/Refueling Family		TFMXR0140NDV		Cert Region		California + CAA Section 177 states California LEV-IV Zero Evap (Option 2)	
Cert/In-Use Code		Both		Standard Level			
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 3-day evap					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.500	0		

Certification Summary Information Report

Test Group	TFMXT03.03V7	Evaporative/Refueling Family	TFMXR0140NDV		
Evaporative/Refueling Family	TFMXR0140NDV	Cert Region	California + CAA Section 177 states California LEV-IV Zero Evap (Option 2)		
Cert/In-Use Code	Both	Standard Level			
Test Procedure	2-day evap				
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	OMHCE	--	0.500	0

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		