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, , 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:	TFMXT03.51F1
Durability Group:	TFMXHHGVNE1A
Evap. Families:	TFMXR0295LDG
Test Group Description:	3.5 Liter V6 FHEV, LDT4
Durability Group Description:	Hybrid Electric w/4 stroke Atkinson, Gasoline Fueled, Turbocharged, Direct Injection, Sequential Fuel Injection, Catalyst Code E (Pt/Pd/Rh)

Applicable Standards:

Federal Exhaust –	Tier 3 Bin 50
Federal Evap –	Tier 3
California Exhaust –	LEV III ULEV50
California Evap –	LEV III
Cold NMHC FEL –	0.4 g/mi
CH4 –	0.030 g/mi
N2O –	0.010 g/mi
Particulate Matter –	3 mg/mi
SFTP FEL –	0.050 g/mi NMOG + NOx

Carlines Covered: F150 HEV 4WD

Vehicles Tested:

Exhaust Emissions Vehicle: SFD1-3.5-J-057 (Config 0)	
FTP TN:	SFMX10086932
HWY TN:	SFMX91005985
US06 TN:	SFMX91005984
SC03 TN:	SFMX10086934
Cold CO TN:	SFMX10086931

Evaporative Emissions Vehicle: MFD1-3.5-J-945 (Config 0)	
2Day TN:	MFMX10064216
Linking TN:	MFMX10063823
3Day TN:	MFMX10065306
RL TN:	MFMX10065305
ORVR TN:	MFMX10064215

Release Date: February 2nd, 2026

For Questions, Contact:
Terry Cowher, tcowher@ford.com (313) 805-6360

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: TFMXR0295LDG

2026 3.5L GTPFDI FHEV F-150

Emission Component		Sensed Parameter	Controlled Parameter	Justification	Calibration Specification
Capless Refueling Component Insert MU5A-9D000-NB		None	Fuel Tank Vapor	Operates in EVAP and/or ORVR	
Vapor Hose with ORVR Recirculation Orifice ML34-9101-AA		None	Vapor Recirculation	Operates in ORVR	Orifice Diameter: 2.75 mm
Fuel Limiting Vent Valve (FLVV) 9L34-9B190-CA		Fuel Tank Vapor	Fuel Tank Vapor	Operates in EVAP and/or ORVR	FLVV Orifice: 9.14 mm FLVV Bypass: 1.25 mm
Grade Vent Valve GV61-9B593-BB (Front)		Fuel Tank Vapor	Fuel Tank Vapor	Operates in EVAP	GVV Main Orifice: 4.0 mm
Grade Vent Valve GV61-9B593-AA (Rear)		Fuel Tank Vapor	Fuel Tank Vapor	Operates in EVAP	GVV Main Orifice: 4.0 mm Bleed Orifice: 0.7 mm
Fuel Tank Pressure Sensor KJ6A-9C052-AA KJ6A-9C052-AB (Alt.)		Fuel Tank Pressure	None	Operates in FTP	
Carbon Canister (Refueling Only) MU5A-9D653-FB		None	Fuel Vapor	Operates in ORVR	295g BWC 4.5L Total Volume
Canister Purge Valve EU5A-9G866-CE		Signal from PCM	Vacuum to canister	Operates in FTP	100 SLPM
Refueling Valve HU5A-9G712-DB		Signal from PCM	Fuel Tank Vapor	Operates in ORVR	
Tank Pressure Control Valve HU5A-9Y477-AC		Signal from PCM	Vacuum to tank	Operates in FTP	
AIS Hydrocarbon Trap GN15-9T303-AA		None	Fuel Tank 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	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG
Certificate Number	--	**CARB Executive Order #**	--
Certificate Issue Date	--	**Certificate Revision Date**	--
Certificate Effective Date	--	**Conditional Certificate**	--
CSI Revision #	--	**CSI Submission/Revision Date**	09/23/2025 12:01:10 PM
Model Year	2026		

Certification Summary Information Report

Test Group	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG

Test Group Information

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

Drive Sources and Fuel(s)

Drive Source #1: Combustion Engine

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

Drive Source #2: Electric Motor

Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator
Electricity	--	No

Hybrid Indicator	Yes		
Multiple Fuel Storage	--	**Rechargeable Energy Storage System Indicator**	Yes
Multiple Fuel Combustion	--	**Off-board Charge Capable Indicator**	No
Fuel Cell Indicator	No	**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	TFMXHHGVNE1A	**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**	TFMXT02.02JF
Test Group OBD Compliance Level	Partial - with deficiencies	**Number of Test Group OBD Deficiencies**	2
OBD Deficiencies Comments	--		
Mfr Test Group Comments	E10 City Litmus Value: 15.2, City Litmus Threshold: 14.7, Hwy Litmus Value 20.1, Hwy Litmus Threshold: 18.4		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG

Evaporative/Refueling Family Information

Evaporative Summary Information Type	New	**Submission/Correction Date**	08/28/2025 12:49:32 PM
Integrated ORVR?	No	**Fuel(s)**	Gasoline, Electricity
Multiple Fuel Storage	Fuels Stored Separately		
Bladder Fuel Tank?	No		
Fuel Tank Material	Plastic	**Fuel Tank Material Description**	Plastic
Fill Pipe Seal Type	Liquid seal		
Air Intake System Vapor Storage Device?	Yes	**Air Intake System Vapor Storage Device Description**	AIS HC Trap in Air Induction System
Fuel System Vapor Storage Canister?	Yes	**Other Vapor Storage**	1 X 4.5L HA 3-port Rect.
Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)	295	**Number of Primary Canisters**	1
Number of Bleed Canisters	0	**Bleed Canister Total Working Capacity (grams)**	0
Mfr Evaporative/Refueling Family Comments	F150 FHEV 3.5L GTPFDI		

Leak Family Details

Leak Family Indicator	Yes		
Canister Bleed Test Indicator	No	**Applicability of Evaporative Canister Bleed Test**	--
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
TFMXR0295LDG-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	132 - F150 PICKUP 4WD HEV	Federal	Part-time 4-Wheel Drive	Semi-Automatic	10	Yes
Ford Motor Company	1 - Ford	132 - F150 PICKUP 4WD HEV	California + CAA Section 177 states	Part-time 4-Wheel Drive	Semi-Automatic	10	Yes

Engine Description

Hybrid Type	IC Engine/Electric Motor	**Hybrid Description**	--
Engine Type	4-Stroke Spark Ignition	**Mfr Engine Description**	Hybrid Electric w/4 stroke Atkinson, Gasoline Fueled, Turbocharged, Direct Injection, Sequential Fuel Injection, Catalyst Code E (Pt/Pd/Rh)
Engine Block Arrangement	V-shaped engine	**Mfr Engine Block Arrangement Description**	--
Camless Valvetrain Indicator	No	**Oil Viscosity/Classification**	5W-30 / ILSAC GF-7
Number of Cylinders/Rotors	6	**Mechanically Variable Compression Ratio Indicator**	N

Certification Summary Information Report

Test Group	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG

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	Platinum + Palladium + Rhodium	Ceramic	Monolith
3	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
4	Three-way catalyst	Platinum + Palladium + Rhodium	Ceramic	Monolith
5	Three-way catalyst	Platinum + Rhodium	Ceramic	Monolith
6	Three-way catalyst	Platinum + Rhodium	Ceramic	Monolith

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

Engine Configuration Number 1

Engine Displacement (liters)	3.5	**Engine Rated Horsepower**	430
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	TiVCT		
Variable Valve Lift?	No		
Variable Valve Lift System Description	--		
Number of Knock Sensors	4	**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	Yes	**Cooled Exhaust Gas Recirculation**	Yes
EGR Type	Electronic/Electric	**Exhaust Gas Recirculation Description if 'Other'**	--
Closed Loop Air Injection System	No		
Air Injection Type	Not Applicable	**Air Injection Type if 'Other'**	--
Mfr Engine Configuration Comments	3.5L F150 FHEV		

Certification Summary Information Report

Test Group	TFMXT03.51F1	Evaporative/Refueling Family	TFMXR0295LDG

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	SFMX10086932	SFMX91005984	SFMX10086934	SFMX10086931	SFMX91005985	20.0	228.2	0.0	286.1	1.0
Electricity	--	--	--	--	--	--	--	--	--	--

SFTP LEV-III Official Test Numbers

Test Group Fuel	FTP	US06	SC03
Electricity	--	--	--
Gasoline	SFMX10086932	SFMX91005984	SFMX10086934

Official Charge Depleting Test Numbers

Test Group Fuel	UDDS	Highway
Gasoline	--	--

Hybrid Electric Vehicle And Fuel Cell Information

Rechargable Energy Storage System	Battery(s)	**Rechargable Energy Storage System, if Other**	--
Battery Type	Lithium Ion	**Number of Battery Packs**	1
Total Voltage of Battery Packs	281	**Battery Energy Capacity**	5.0
Battery Specific Energy	36.8	**Battery Charger Type**	On-Board
Number of Capacitors	--	**Capacitor Rating (In Farads)**	--
Mfr Capacitor Comments	--		
Hydraulic System Description	--		
Regenerative Braking Type	Electrical Regen Brake		
Regenerative Braking Source	Both	**Driver Controlled Regenerative Braking**	No
Mfr Regenerative Braking Description	--		
Drive Motor(s)/Generator(s)	1		
Motor/Generator Type 1	DC Permanent Magnet, brushless	**Rated Motor/Generator Power**	35
Mfr Fuel Cell Description	--		
Fuel Cell On-Board H2 Storage Capacity (kg)	--	**Usable H2 Fill Capacity (kg)**	--
Mfr Hybrid Electric/ Electric Vehicle Comments	--		

Certification Summary Information Report

Test Group	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG

Emission Data Vehicle Information

Vehicle ID / Configuration	MFD1-3.5-J-945 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	MFMXT03.51F1	**Original Evaporative/Refueling Family**	MFMXR0295LDG
Original Test Vehicle Model Year	2021		

Vehicle Model

Represented Test Vehicle Make	Ford	**Represented Test Vehicle Model**	F150 FHEV

Leak Family Details

Leak Family Identifier	--	**Leak Family Name**	--

Drive Sources and Fuel System Details

Drive Source and Fuel#	Drive Source	Fuel
1	Electric Motor	Electricity
2	Combustion Engine	Gasoline

Hybrid Indicator	Yes		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	No	**Rechargeable Energy Storage System Indicator**	Yes
Rechargeable Energy Storage System	Battery(s)	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	No		
Odometer Correction -- Initial	0	**Odometer Correction Factor**	1.03
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles		
Odometer Correction Units	Miles		
Engine Code	MTFDCNNB00	**Rated Horsepower**	400
Displacement (liters)	3.5		
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**	Part-time 4-Wheel Drive
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	150,000 (mi)
Curb Weight (lbs)	5604	**Equivalent Test Weight (pounds)**	6000
GVWR (lbs)	7350	**N/V Ratio**	25.3
Axle Ratio	3.73		
Transmission Type	Semi-Automatic	**# of Transmission Gears**	10
Transmission Lockup	Yes	**Creeper Gear**	No

Certification Summary Information Report

Test Group	TFMXT03.51F1	Evaporative/Refueling Family	TFMXR0295LDG

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	55.69	0.2272	0.03972	9.53	-0.11697	0.03797	22.2
Cold CO	55.69	0.2272	0.03972	9.53	-0.11697	0.03797	N/A
US06	55.69	0.2272	0.03972	9.53	-0.11697	0.03797	N/A

Emission Control Device Comments T3B70/ULEV70 SFTP-0.080 PM3 CB4 T3e/L3e

Manufacturer Test Vehicle Comments F150 3.5L FHEV AWD

Certification Summary Information Report

Test Group	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG

Test #	**MFMX10063823**	**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	02/06/2020	**Fuel**	N/A
Fuel Batch ID	373-B	**Fuel Calibration Number**	49
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	4804	**Odometer Units**	M
4WD Test Dyno	No	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	527.31661	--
FE BAG 1 (Bag 1 Fuel Economy)	16.48995	16.48995
CO2 BAG 2 (Bag 2 Carbon Dioxide)	470.63506	--
FE BAG 2 (Bag 2 Fuel Economy)	18.46098	18.46098
METHANE (CH4 - Methane)	0.00495	--
CO (Carbon Monoxide)	0.34786	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.205247	--
DT-EER (Drive Trace Energy Economy Rating)	0.133732	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.224012	--
HCHO (Formaldehyde)	0.000182	--
MFR FE (Manufacturer Fuel Economy)	17.56144	17.56144
NOX (Nitrogen Oxide)	0.04493	--
N2O (Nitrous Oxide)	0.00166	--
HC-NM (Non-methane Hydrocarbon)	0.0128905	--
NMOG (Non-methane organic gases)	0.01414	--
PM (Particulate Matter)	0.0009	--
HC-TOTAL (Total Hydrocarbon)	0.0175	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	496	999
Optional Carbon-Related Exhaust Emissions	496	999

Certification Summary Information Report

Test Group	TFMXT03.51F1	Evaporative/Refueling Family	TFMXR0295LDG

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	495.00813	--

Manufacturer Test Comments FTP & HWY FUL NMOG = 1.04 * NMHCr

Test #	**MFMX10064216**	**Test Procedure**	**23 - 2-day evap**
Exhaust Test # for this Evap Test	MFMX10063823	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/05/2020	**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	5105	**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)
OMHCE (Organic material Hydrocarbon Equivalent)	0.1644	--
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.1644	--

Manufacturer Test Comments 2 Day EVAP THC x 1.08

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	0.1644	0.0028	0.167	0.500	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	OMHCE	0.1644	0.0028	0.167	0.500	Pass

Certification Summary Information Report

Test Group	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG

Test #	**MFMX10065306**	**Test Procedure**	**34 - Federal fuel 3-day evap**
Exhaust Test # for this Evap Test	MFMX10063823	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	05/29/2020	**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	5232	**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 (miles per gallon)
OMHCE (Organic material Hydrocarbon Equivalent)	0.215	--
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.215	--

Manufacturer Test Comments Measured NMOG

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	150,000 miles	Federal Tier 3 Evap	HC-TOTAL-EQUIV	0.2150	0.0028	0.218	0.500	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	OMHCE	0.2150	0.0028	0.218	0.500	Pass

Certification Summary Information Report

Test Group	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG

Test #	**MFMX10064215**	**Test Procedure**	**24 - Federal fuel refueling test (ORVR)**
Exhaust Test # for this Evap Test	MFMX10063823	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/03/2020	**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	5160	**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)	0.00688	--
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.00688	--

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	0.007	0.003	0.01	0.20	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	OMHCE	0.007	0.003	0.01	0.20	Pass

Certification Summary Information Report

Test Group	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG

Test #	**MFMX10065305**	**Test Procedure**	**32 - Federal Fuel Running Loss**
Exhaust Test # for this Evap Test	MFMX10063823	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	05/29/2020	**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	5243	**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 (miles per gallon)
OMHCE (Organic material Hydrocarbon Equivalent)	0	--
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0	--

Manufacturer Test Comments Measured NMOG

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

Certification Summary Information Report

Test Group	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG

Emission Data Vehicle Information

Vehicle ID / Configuration	SFD1-3.5-J-057 / 0	**Manufacturer Vehicle Configuration Number**	0
Original Test Group Name	SFMXT03.51F1	**Original Evaporative/Refueling Family**	SFMXR0295LDG
Original Test Vehicle Model Year	2025		

Vehicle Model

Represented Test Vehicle Make	Ford	**Represented Test Vehicle Model**	F150 HEV 4WD

Leak Family Details

Leak Family Identifier	001	**Leak Family Name**	SFMXR0295LDG-001

Drive Sources and Fuel System Details

Drive Source and Fuel#	Drive Source	Fuel
1	Electric Motor	Electricity
2	Combustion Engine	Gasoline

Hybrid Indicator	Yes		
Multiple Fuel Storage	--	**Multiple Fuel Combustion**	--
Fuel Cell Indicator	No	**Rechargeable Energy Storage System Indicator**	Yes
Rechargeable Energy Storage System	Battery(s)	**Rechargeable Energy Storage System, if 'Other'**	--
Off-board charge Capable Indicator	No		
Odometer Correction -- Initial	0	**Odometer Correction Factor**	1.03
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles		
Odometer Correction Units	Miles		
Engine Code	STFDCNNA01	**Rated Horsepower**	400
Displacement (liters)	3.5		
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**	4-Wheel Drive
Shift Indicator Light Usage	Not eqipped	**Aged Emission Components**	150,000 (mi)
Curb Weight (lbs)	5930	**Equivalent Test Weight (pounds)**	6000
GVWR (lbs)	7400	**N/V Ratio**	25.3
Axle Ratio	3.73		
Transmission Type	Semi-Automatic	**# of Transmission Gears**	10
Transmission Lockup	Yes	**Creeper Gear**	No

Certification Summary Information Report

Test Group	TFMXT03.51F1	Evaporative/Refueling Family	TFMXR0295LDG

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	36.08	0.58	0.03296	-23.95	0.378	0.02999	19.7
Cold CO	36.08	0.58	0.03296	-23.95	0.378	0.02999	N/A
US06	36.08	0.58	0.03296	-23.95	0.378	0.02999	N/A

Emission Control Device Comments --

Manufacturer Test Vehicle Comments --

Certification Summary Information Report

Test Group	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG

Test #	**SFMX10086931**	**Test Procedure**	**11 - Cold CO**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	28 - Cold CO E10 Regular Gasoline (Tier 3)
Test Date	06/30/2024	**Fuel**	Gasoline
Fuel Batch ID	375-B	**Fuel Calibration Number**	54
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	APTL		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4011	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	760.22096	--
FE BAG 1 (Bag 1 Fuel Economy)	11.30785	11.30785
CO2 BAG 2 (Bag 2 Carbon Dioxide)	538.40592	--
FE BAG 2 (Bag 2 Fuel Economy)	16.09949	16.09949
CO2 BAG 3 (Bag 3 Carbon Dioxide)	512.91203	--
FE BAG 3 (Bag 3 Fuel Economy)	16.88469	16.88469
METHANE (CH4 - Methane)	0.01801	--
CO (Carbon Monoxide)	0.61134	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.2588	--
DT-EER (Drive Trace Energy Economy Rating)	-0.0183	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.8996	--
MFR FE (Manufacturer Fuel Economy)	15	15
NOX (Nitrogen Oxide)	0.038132	--
N2O (Nitrous Oxide)	0.01	--
HC-NM (Non-methane Hydrocarbon)	0.1049	--
NMOG (Non-methane organic gases)	0.109134	--
HC-TOTAL (Total Hydrocarbon)	0.12416	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	578	--

Certification Summary Information Report

Test Group	TFMXT03.51F1	Evaporative/Refueling Family	TFMXR0295LDG

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	577.30936	--

Manufacturer Test Comments --

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	0.61	--	--	--	--	--	0.6	12.5	Pass
Fed	120,000 miles	Federal Tier 3 Bin 50	HC-NM	0.10	--	--	--	--	--	0.1	0.4	Pass
CA	50,000 miles	California LEV-III ULEV50	CO	0.61	--	--	--	--	--	0.6	12.5	Pass

Certification Summary Information Report

Test Group	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG

Test #	**SFMX10086932**	**Test Procedure**	**21 - Federal fuel 2-day exhaust (w/can load)**
Exhaust Test # for this Evap Test	--	**Test Fuel Type**	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	06/27/2024	**Fuel**	Gasoline
Fuel Batch ID	373-B	**Fuel Calibration Number**	88
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	APTL		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3945	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	481.03183	--
FE BAG 1 (Bag 1 Fuel Economy)	18.11638	18.11638
CO2 BAG 2 (Bag 2 Carbon Dioxide)	445.81934	--
FE BAG 2 (Bag 2 Fuel Economy)	19.55757	19.55757
METHANE (CH4 - Methane)	0.00555	--
CO (Carbon Monoxide)	0.13582	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.35	--
DT-EER (Drive Trace Energy Economy Rating)	-0.18	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.14	--
HCHO (Formaldehyde)	0.000239	--
MFR FE (Manufacturer Fuel Economy)	18.9	18.9
NOX (Nitrogen Oxide)	0.010249	--
N2O (Nitrous Oxide)	0.00016	--
HC-NM (Non-methane Hydrocarbon)	0.0071	--
NMOG (Non-methane organic gases)	0.007368	--
PM (Particulate Matter)	0.001039	--
HC-TOTAL (Total Hydrocarbon)	0.01228	--

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

Certification Summary Information Report

Test Group TFMXT03.51F1 **Evaporative/Refueling Family** TFMXR0295LDG

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	460.96071	--

Manufacturer Test Comments --

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	0.14	--	--	--	--	--	0.1	1.7	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	CO-COMP	0.09	--	--	--	--	--	0.1	4.2	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	CREE	999	--	--	--	0	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 50	HCHO	0.0002	--	--	--	--	--	0.000	0.004	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	METHANE	0.0056	--	--	--	--	--	0.006	0.030	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	N2O	0.0002	--	--	--	--	--	0.000	0.010	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NMOG	0.0074	--	1.1	--	--	--	0.007	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NMOG+NOX	0.0176	--	--	--	--	--	0.018	0.050	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NMOG+NOX-COMP	0.0223	--	--	--	--	--	0.022	0.050	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NOX	0.0102	--	--	--	--	--	0.010	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	PM	0.0010	--	--	--	--	--	0.001	0.003	Pass
CA	150,000 miles	California LEV-III ULEV50	CO	0.14	--	--	--	--	--	0.1	1.7	Pass
CA	150,000 miles	California LEV-III ULEV50	CO-COMP	0.09	--	--	--	--	--	0.1	4.2	Pass
CA	150,000 miles	California LEV-III ULEV50	HCHO	0.0002	--	--	--	--	--	0.000	0.004	Pass
CA	150,000 miles	California LEV-III ULEV50	NMOG	0.0074	--	1.1	--	--	--	0.007	999.999	Pass
CA	150,000 miles	California LEV-III ULEV50	NMOG+NOX	0.0176	--	--	--	--	--	0.018	0.050	Pass
CA	150,000 miles	California LEV-III ULEV50	NMOG+NOX-COMP	0.0223	--	--	--	--	--	0.022	0.050	Pass
CA	150,000 miles	California LEV-III ULEV50	NOX	0.0102	--	--	--	--	--	0.010	999.999	Pass
CA	150,000 miles	California LEV-III ULEV50	PM	0.0010	--	--	--	--	--	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	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG

Test #	**SFMX91005985**	**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	07/31/2024	**Fuel**	Gasoline
Fuel Batch ID	28637	**Fuel Calibration Number**	1
Vehicle Class	LDT4 (ALVW > 5750, LVW 0-3750, GVW > 6000)	**DF Type**	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4117	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.001329	--
CO (Carbon Monoxide)	0.0092313	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	4.3275576	--
DT-EER (Drive Trace Energy Economy Rating)	0.0166088	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	6.3118238	--
MFR FE (Manufacturer Fuel Economy)	26.785244	--
NOX (Nitrogen Oxide)	0.0022687	--
N2O (Nitrous Oxide)	0	--
HC-NM (Non-methane Hydrocarbon)	0.0000405	--
NMOG (Non-methane organic gases)	0.0000417	--
HC-TOTAL (Total Hydrocarbon)	0.0013509	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	9999.9999999	999

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	323.725647	--

Manufacturer Test Comments None

Certification Summary Information Report

Test Group TFMXT03.51F1 **Evaporative/Refueling Family** TFMXR0295LDG

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	--	999	--	--
Fed	150,000 miles	Federal Tier 3 Bin 50	NMOG	0.0000	--	1.03	--	--	--	0.000	999.999	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NMOG+NOX	0.0023	--	--	--	--	--	0.002	0.050	Pass
Fed	150,000 miles	Federal Tier 3 Bin 50	NOX	0.0023	--	--	--	--	--	0.002	999.999	Pass
CA	150,000 miles	California LEV-III ULEV50	NMOG	0.0000	--	1.03	--	--	--	0.000	999.999	Pass
CA	150,000 miles	California LEV-III ULEV50	NMOG+NOX	0.0023	--	--	--	--	--	0.002	0.050	Pass
CA	150,000 miles	California LEV-III ULEV50	NOX	0.0023	--	--	--	--	--	0.002	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	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG

Test #	**SFMX91005984**	**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	07/31/2024	**Fuel**	N/A
Fuel Batch ID	28637	**Fuel Calibration Number**	1
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4142	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	737.4973755	--
FE BAG 1 (Bag 1 Fuel Economy)	999	--
CO2 BAG 2 (Bag 2 Carbon Dioxide)	402.1809082	--
FE BAG 2 (Bag 2 Fuel Economy)	999	--
METHANE (CH4 - Methane)	0.0094267	--
CO (Carbon Monoxide)	0.1116491	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.5176582	--
DT-EER (Drive Trace Energy Economy Rating)	-1.3996508	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-2.6785178	--
MFR FE (Manufacturer Fuel Economy)	999	--
NOX (Nitrogen Oxide)	0.033608	--
N2O (Nitrous Oxide)	0.0105971	--
HC-NM (Non-methane Hydrocarbon)	0.0158862	--
NMOG (Non-methane organic gases)	0.0163628	--
HC-TOTAL (Total Hydrocarbon)	0.0251809	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	477.2978516	--

Manufacturer Test Comments None Unrounded Result for the following test results were modified by Verify: MFR FE, FE BAG 1, FE BAG 2

Certification Summary Information Report

Test Group	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG

Test #	**SFMX10086934**	**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	06/28/2024	**Fuel**	N/A
Fuel Batch ID	373-B	**Fuel Calibration Number**	88
Vehicle Class	N/A	**DF Type**	Mfr. Determined
Verify Test Lab ID	APTL		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3996	**Odometer Units**	M
4WD Test Dyno	Yes	**Diesel Adjustment Factor Usage**	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	**Road Speed Fan Usage**	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
METHANE (CH4 - Methane)	0.00696	--
CO (Carbon Monoxide)	0.03149	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.7037	--
DT-EER (Drive Trace Energy Economy Rating)	-0.1713	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.8558	--
MFR FE (Manufacturer Fuel Economy)	19	19
NOX (Nitrogen Oxide)	0.003672	--
HC-NM (Non-methane Hydrocarbon)	0.0021	--
NMOG (Non-methane organic gases)	0.002223	--
HC-TOTAL (Total Hydrocarbon)	0.00958	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	458	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	457.83177	--

Manufacturer Test Comments --

Certification Summary Information Report

Test Group	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG

Fuel Properties

Fuel Batch ID	**373-B**	**Fuel Calibration Number**	**88**
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	06/25/2024
Fuel Batch Calibration Effective Date	06/25/2024	**Fuel Batch Calibration Ineffective Date**	12/31/2100
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	--	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.752
Fuel Ethanol Volume Percent (%)	9.8	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17872
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	**28637**	**Fuel Calibration Number**	**1**
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	08/26/2021
Fuel Batch Calibration Effective Date	08/26/2021	**Fuel Batch Calibration Ineffective Date**	--
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	--	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.75
Fuel Ethanol Volume Percent (%)	9.6	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17894
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.825	**Weight Fraction CO2**	--

Fuel Batch ID	**373-B**	**Fuel Calibration Number**	**49**
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	**Fuel Batch Calibration Date**	01/30/2020
Fuel Batch Calibration Effective Date	01/30/2020	**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**	0.751
Fuel Ethanol Volume Percent (%)	9.5	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17945
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	**Fuel Carbon Mass Fraction (E10)**	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.829	**Weight Fraction CO2**	--

Fuel Batch ID	**375-B**	**Fuel Calibration Number**	**54**
Test Fuel Type	28 - Cold CO E10 Regular Gasoline (Tier 3)	**Fuel Batch Calibration Date**	06/28/2024
Fuel Batch Calibration Effective Date	06/28/2024	**Fuel Batch Calibration Ineffective Date**	12/31/2100

Certification Summary Information Report

Test Group	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG
Carbon Weight Fraction NMHC	--	**Carbon Weight Fraction HC**	--
Exhaust Carbon Weight Fraction	--	**Fuel Methanol Volume Fraction**	--
Fuel Density (grams/cubic ft)	--	**Fuel Specific Gravity**	0.743
Fuel Ethanol Volume Percent (%)	9.5	**Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)**	17918
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**	--

Certification Summary Information Report

Test Group	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG

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	--	--	--	--	--	--	--	1.7
150,000 miles	CO-COMP	--	--	--	--	--	--	--	4.2
150,000 miles	CREE	--	--	--	--	--	--	0	999.999
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	METHANE	--	--	--	--	--	--	--	0.030
150,000 miles	N2O	--	--	--	--	--	--	--	0.010
150,000 miles	NMOG	--	--	1.1	--	--	--	--	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.050
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	--	0.050
150,000 miles	NOX	--	--	--	--	--	--	--	999.999
150,000 miles	OPT-CREE	--	--	--	--	--	--	0	999.999
150,000 miles	PM	--	--	--	--	--	--	--	0.003

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	--	--	--	--	--	--	--	12.5
120,000 miles	HC-NM	--	--	--	--	--	--	--	0.4

Certification Summary Information Report

Test Group	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG
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	999.999
150,000 miles	NMOG	--	--	1.03	--	--	--	--	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.050
150,000 miles	NOX	--	--	--	--	--	--	--	999.999
150,000 miles	OPT-CREE	--	--	--	--	--	--	0	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	PM	--	--	--	--	--	--	--	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**	HWFE

Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	NMOG	--	--	1.03	--	--	--	--	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.050
150,000 miles	NOX	--	--	--	--	--	--	--	999.999

Certification Summary Information Report

Test Group	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG
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	--	--	--	--	--	--	--	1.7
150,000 miles	CO-COMP	--	--	--	--	--	--	--	4.2
150,000 miles	HCHO	--	--	--	--	--	--	--	0.004
150,000 miles	NMOG	--	--	1.1	--	--	--	--	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.050
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	--	0.050
150,000 miles	NOX	--	--	--	--	--	--	--	999.999
150,000 miles	PM	--	--	--	--	--	--	--	0.003

Cert Region	California + CAA Section 177 states	**Cert/In-Use Code**	Both
Vehicle Class	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	--	--	--	--	--	--	--	12.5

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	PM	--	--	--	--	--	--	--	0.006

Evaporative/Refueling Standards

Certification Summary Information Report

Test Group	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG

Evaporative/Refueling Family	TFMXR0295LDG	**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	0.003

Evaporative/Refueling Family	TFMXR0295LDG	**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	0.0028

Evaporative/Refueling Family	TFMXR0295LDG	**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	TFMXR0295LDG	**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	0.003

Evaporative/Refueling Family	TFMXR0295LDG	**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	0.0028

Certification Summary Information Report

Test Group	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG
Evaporative/Refueling Family	TFMXR0295LDG	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Both	**Standard Level**	California LEV-III Zero Evap (Option 2)
Test Procedure	Federal Fuel Running Loss		

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

Evaporative/Refueling Family	TFMXR0295LDG	**Cert Region**	California + CAA Section 177 states
Cert/In-Use Code	Both	**Standard Level**	California LEV-III Zero Evap (Option 2)
Test Procedure	Federal fuel 3-day evap		

Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	OMHCE	--	0.500	0.0028

Evaporative/Refueling Family	TFMXR0295LDG	**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	0.0028

Certification Summary Information Report

Test Group	TFMXT03.51F1	Evaporative/Refueling Family	TFMXR0295LDG

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	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG
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	TFMXT03.51F1	**Evaporative/Refueling Family**	TFMXR0295LDG
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 the Common Section for Statements of Compliance.

SECTION 8

Emission Testing Waiver Statements and Statements of Compliance

Statement of Compliance for test group TFMXT03.51F1

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

Common Family Parameters – Test Group: TFMXT03.51F1

Vehicle Program:

Test Group Information	
Vehicle/Engine Class	LDT4
Vehicle Fuel Category	*Hybrid*
Operating Fuel 1	*Gas*

Engine Displacement (liters)	3.5L Full Hybrid
Total System HP @ RPM (91 Ron)	430 hp @ 6000 RPM
Total System Torque lb-ft @ RPM (91 Ron)	570 lb-ft @ 3000 RPM

Emission Control System:	
Air Aspiration Method*	*Turbocharged (TC)*
Charge Air Cooler Type* (TG-51)	*Air*
Exhaust Gas Recirculation (EGR)*	Yes
Cooled EGR *	Yes
Air injection Type (AIR)*	NA=Not applicable
After-Treatment Type *	TWC
Fuel Metering System *	Gasoline Direct (GDI)
	Sequential Fuel (SFI)
Heated oxygen sensor (HO_2S)*	YES
Heated Air/Fuel Sensor or WR oxygen sensor (AFS/WR-HO2S)*	YES
Feedback Sensor Configuration	WR-HO2S, HO2S

Shift Schedules	See Common Section
EVAP Canister working Capacity	See Common Section
EVAP Canister Bed Volume	See Common Section
Fuel Tank Temperature Profile	See Common Section

*** VECI label item**

Calibration Descriptions – TFMXT03.51F1

Cert Code / Calibration	Evaporative Family	Application	Transmission	Vehicle
TTFDCNNJ0002/TTFDCNNA05 TTFDCNNK0002/TTFDCNNA05 TTFDCNNL0002/TTFDCNNA05 TTFDCNNN0002/TTFDCNNA05 TTFDCNNP0002/TTFDCNNA05 TTFDCNNJ0003/TTFDCNNA06 TTFDCNNK0003/TTFDCNNA06 TTFDCNNL0003/TTFDCNNA06 TTFDCNNN0003/TTFDCNNA06 TTFDCNNP0003/TTFDCNNA06	TFMXR0295LDG	50S	10R80MHT	3.5L F150 FHEV

Reference Specifications		
Spark Plug	DYFS-12YPT Gap: 0.8 +/- 0.05 mm	
Ignition Timing ^{O}BTDC (No SPOUT connector)	PCM Controlled	
Idle RPM	PCM Controlled	
Target (Base) in Drive (A/C OFF/A/C ON)	PCM Controlled	Special conditions which may require idle speeds higher than base are listed below. (See Section 16.05 for descriptions of these strategies):
In Neutral (A/C OFF/A/C ON)	850/850 1000	

Potential Idle/Drive Speed Modifier	Function Utilized (Y/N)	Purpose
Low or high air charge temperature	N	Heater, A/C or engine cooling performance
Low catalyst temperature	N	Achieve/maintain light off
Low engine coolant temperature	N	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	N	Avoid stalling or no-start
High Alternator load	N	Preserve battery life and avoid low voltage
High-speed fan operation	N	For engine and A/C condenser cooling
Extended neutral idle time	N	Maintain catalyst temperature
Power steering pressure	N	Ensure adequate P/S assistance
High Altitude	N	Maintain air mass flow to avoid stalling
Alternate calibration	Y	Avoid spark plug fouling during plant/dealer handling
Drive Speed Control or Shift Delay	Y	Increase engine speed to improve cabin heating or cooling
Heated Windshield	N	Maintain charging margin
ETC Failure	N	Electronic Throttle Failure Min RPM
A/C Adder (50RPM)	N	NVH Improvement
High auxiliary loads	Y	Belt tensioner durability on BiSG and HV Motor cooling
Eco Idle Feature (Park/Neutral)	Y	Raise idle speed to reduce fuel consumption and engine off time during Park/Neutral state

Emission Component	Sensed Parameter	Controlled Parameter	Justification[1]	Calibration
ELECTRONICS – PCM[2]				
FUEL				
Fuel Injector (DI)	Signal from PCM	Fuel Flow	N/A	Static Flow Rate: 821 g/min
Fuel Injector (PFI)	Signal from PCN	Fuel Flow	N/A	Static Flow Rate: 128 g/min
Fuel Pressure (DI)	Signal from PCM	Fuel Pressure	N/A	250 bar (25 MPa)
Regulated Fuel Pressure (PFI)	Signal from PCM	Fuel Pressure	N/A	380-500 kpa
Fuel Pump (DI)	Signal from PCM	Fuel Flow	N/A	DI pump: Up to 1.3 cc/rev for 3 lobe, 5.5mm lift (theoretical delivery volume)
Fuel Pump (PFI)	Signal from PCM	Fuel Flow	N/A	169 lph @ 12.0V/520kpa
Torque Based Electronic Throttle Control	Signal from PCM	None	Operates in FTP	Throttle Diameter: 68 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	See Section 16.00.05.00 for air-fuel calibration (LAMBSE) in function "ol_lam_pwr_a_m" if accelerator pedal is greater than "FN311P" (90%) for "ol_tm_pwr_dly_a_m" seconds.

			demand	Otherwise, open loop target, "OL_LAM_DES" is 1.00 (stoich). * and the entry conditions in function "FN311P".
Open Loop Delay Timers	Time and Gear	Delay open loop fuel	Allows time for downshift; limit enrichment to unusual conditions	See Section 16.00.05.00 for delay time calibration "FN1311P" and the maximum open-loop count-up time, "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"

Emission Component	Sensed Parameter	Controlled Parameter	Justification[1]	Calibration
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 Deceleration Fuel Shut-Off (DFSO)	Injector state, inferred catalyst O_2 stored, and CMS voltage	Air-Fuel Ratio (LAMBSE)	Substantially demonstrated on FTP	See Section 16.00.05.00 for air-fuel ratio utilized following fuel shut-off event, "LAM_REACT"
CRANKCASE				
Crankcase Ventilation Oil Separator Assembly	Manifold Vacuum	Air Flow to Engine	Operates in FTP	EV#:298 2.55-3.75 SCFM @ 3" Hg 2.00-3.20 SCFM @ 8" Hg 0.85-1.65 SCFM @ 15" Hg
Crankcase Ventilation Oil Separator Assembly – Not Heated	Ambient Temp Battery Voltage	PCV Heating	Vehicle Safety	N/A

Emission Component	Sensed Parameter	Controlled Parameter	Justification[1]	Calibration
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 "hdfcfg_ix_fe_v" Best FE mapped points in combination with "FNHDFX_BEST_FE_DIST" (eng_spd, load) and "FNHDFX_BEST_DRIVE_DIST" (eng_spd, pct_load) distances.
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 "FNHDFX_VCT_COMB_STAB_EXH" and "FNHDFX_VCT_COMB_STAB_INT"
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 "FNHDFX_FNEOT_ADV_INT" and "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 "fnvct_enable_delay" and "FNHDFX_VCT_COMB_STAB_EXH" and "FNHDFX_VCT_COMB_STAB_INT"
Cam Retard Limitation under Hi Torque Demand n	Engine Speed and Requested Torque	Cam Phase Timing or Throttle Position	Protection against damage or accident under high torque	See Section 16.00.05.00 for Contained within the Best FE, Best Drv noted above and the Optimal Performance

			demand	“FN_HDFX_OP_IVO” and “FN_HDFX_OP_EVC” calibrations.
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 “FNHDFX_VCTLIM_EXH”
ENGINE COOLING				
Thermostat	Coolant Temperature	Coolant Flow	Engine Protection	Start to Open: 90.6 °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

2026MY 3.5L F150 FHEV
Exhaust Emissions Parts List TFMXT03.51F1

Vehicle	Certification Level	Certification Code	Calibration	ECM -12A650-	HPCM1[1] -7P120-	BSCM[2] -2C219-	BECM[4] -10B687-	Date
F150	INI	TTFDCNNJ0002 TTFDCNNK0002 TTFDCNNL0002 TTFDCNNN0002 TTFDCNNP0002	TTFDCNNA05	PTL3A-AAC	PTL38-MB	TL34-AD	ML38-AH	08/07/2025
F150	INI	TTFDCNNJ0003 TTFDCNNK0003 TTFDCNNL0003 TTFDCNNN0003 TTFDCNNP0003	TTFDCNNA06	PTL3A-AAD	PTL38-MB	TL34-AD	ML38-AH	09/08/2025

---------- All Other Exhaust Emission Parts ----------

Part Name	Part Number
Catalyst	RL34-5E214-DF
Catalyst	RL34-5G218-DF
Battery Pack	ML38-10B759-AM
Charge Air Cooler	ML34-6K775-CA
PCV	KR3E-6A666-BA
Camshaft Variable Timing Solenoid	HL3E-6B297-DD
Crankshaft Position Sensor	RL3A-6C315-AB
Cylinder Head Temperature Sensor	P2GA-6G004-AC
Turbo Charger	RL3E-6C879-BD RL3E-6K682-BD
EGR Module Asy	RL3E-9Y456-BB RL3E-9Y456-CA (Alt.)
EGR Cooler	ML3E-9R442-AF
EGR Cold Tube with Orifice	ML3E-9E470-AD
EGR Temp Sensor	KA1A-9U498-AB
Fuel Pump (High Pressure):	ML3E-9D376-AA
PFI Fuel Injectors (6):	ML3E-9F593-BA
DI Fuel Injectors (6):	ML3E-9G929-AA
Electronic Throttle Body	HL3E-9F991-AA
Fuel Pressure Sensor (Low Pressure):	P2GE-9F972-BA P2GE-9F972-BB (Alt.
Fuel Pressure Sensor (High Pressure):	K2GE-9F972-BA K2GE-9F972-AA (Alt.)
Fuel Pump (Low Pressure):	ML34-9350-SA
Camshaft Position Sensor	BL31-12K073-BC RL3A-12K073-AB (Alt.)
Intake Air Temperature Sensor (IAT)	DS7A-12A697-AA
UEGO	RL3A-9Y460-BC RL3A-9Y460-CC
CMS	RL3A-9G444-EC RL3A-9G444-HA

1. HPCM: Hybrid Powertrain Control Module Assembly
2. BSCM: Brake System Control Module Assembly
3. BSCM CAL: Brake System Control Module Calibration
4. BECM: Battery Electric Control Module Assembly

SECTION 12.00.05.00 -- 2026 TEST VEHICLE REQUIREMENTS

Selection	CAP 2000 Exhaust Data Vehicle	Evaporative Emission Data Vehicle
Test Group	SFMXT03.51F1	PFMXT03.51F1
Evaporative Emission Family	SFMXR0295LDG	PFMXR0295LDG
Engine Displacement	3.5L Hybrid	3.5L Hybrid
Engine Code	STFDCNNA01	MTFDCNNB00
Catalyst Code	See Section 2.	See Section 2.
Exhaust Control System	TWC/WR-HO2S/HO2S/TC/CAC/EGR/EGRC/DFI/SFI	TWC/WR-HO2S/HO2S/TC/CAC/EGR/EGRC/DFI/SFI
Model	F150	F150
Transmission	10R80 MHT	10R80 MHT
Shift Schedule	NA	NA
Equivalent Test Weight	6000	6000
THP	19.7	22.2
Target	F0: 36.08, F1: 0.58, F2: 0.03296	F0: 55.69, F1: 0.2272, F2: 0.03972
Dyno Coeff	A: -23.95, B: 0.378, C: 0.02999 (AWD Dyno)	A: 9.53, B: -0.11697, C: 0.03797 (AWD Dyno) A: 39.35, B: -0.07513, C: 0.03 (2WD Dyno All EVAP)
Axle Ratio	3.73	3.73
N/V Ratio (rpm/mph)	25.3	25.3
Tires	LT265/70/R18	LT265/70/R18
Drive Mode Used	Sport	Sport
Actual Test Vehicle	Tailpipe	Evaporative Emission
Model Year	2025	2021
Engine Family	SFMXT03.51F1	MFMXT03.51F1
Vehicle ID Number	SFD1-3.5-J-057	MFD1-3.5-J-945
Configuration	00	00
Test Performed	City, Hwy, US06, SC03 & Cold CO	2 Day EVAP, 3 Day EVAP ERL, ORVR
Fan/Location	RSM	RSM

Vehicle Description Report

Test Group: TFMXT03.51F1

ID Number	5292879	5292949	5292889	5292959	5292899	5292969	5292900	5292970
Displacement	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Cert Code	TTFDCNNJ0002	TTFDCNNJ0003	TTFDCNNK0002	TTFDCNNK0003	TTFDCNNL0002	TTFDCNNL0003	TTFDCNNN0002	TTFDCNNN0003
Fuel Tank(s)	F8	F8	F8	F8	F8	F8	F8	F8
Carline	F150 PICKUP 4WD HEV	F150 PICKUP 4WD HEV	F150 PICKUP 4WD HEV	F150 PICKUP 4WD HEV	F150 PICKUP 4WD HEV	F150 PICKUP 4WD HEV	F150 PICKUP 4WD HEV	F150 PICKUP 4WD HEV
Wheel Configuration	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Body Style	Super Crew	Super Crew	Super Crew	Super Crew	Super Crew	Super Crew	Super Crew	Super Crew
Wheelbase	145.0	145.0	145.0	145.0	145.0	145.0	157.0	157.0
Transcode Combo	GCC	GCC	GCC	GCC	GCC	GCC	GCC	GCC
Curb Weight	5869	5869	5869	5869	5869	5869	5883	5883
ETW	6000	6000	6000	6000	6000	6000	6000	6000
Loaded Weight LVW	6169	6169	6169	6169	6169	6169	6183	6183
ALVW-ETW	6500	6500	6500	6500	6500	6500	6500	6500
Adj. Loaded Weight	6634	6634	6634	6634	6634	6634	6642	6642
GVWR	7400	7400	7400	7400	7400	7400	7400	7400
GCWR	17100	17100	17100	17100	17100	17100	18400	18400
Min Axle Ratio	3.73	3.73	3.73	3.73	3.73	3.73	3.73	3.73
Max Axle Ratio	3.73	3.73	3.73	3.73	3.73	3.73	3.73	3.73
Min N/V Ratio	25.3	25.3	25.0	25.0	25.1	25.1	25.3	25.3
Max N/V Ratio	26.1	26.1	25.0	25.0	25.1	25.1	26.1	26.1
Emission Vehicle Class	LDT4	LDT4	LDT4	LDT4	LDT4	LDT4	LDT4	LDT4
Drive Code	Part-time 4-Wheel Drive	Part-time 4-Wheel Drive	Part-time 4-Wheel Drive	Part-time 4-Wheel Drive	Part-time 4-Wheel Drive	Part-time 4-Wheel Drive	Part-time 4-Wheel Drive	Part-time 4-Wheel Drive
Trans Type	Semi-Automatic	Semi-Automatic	Semi-Automatic	Semi-Automatic	Semi-Automatic	Semi-Automatic	Semi-Automatic	Semi-Automatic
Calibration Application	50ST	50ST	50ST	50ST	50ST	50ST	50ST	50ST
Min Tire Size	265/70R17 - 26.1	265/70R17 - 26.1	275/60R20 - 25	275/60R20 - 25	275/50R22 - 25.1	275/50R22 - 25.1	265/70R17 - 26.1	265/70R17 - 26.1
Max Tire Size	LT265/70R18 - 25.3	LT265/70R18 - 25.3	275/60R20 - 25	275/60R20 - 25	275/50R22 - 25.1	275/50R22 - 25.1	LT265/70R18 - 25.3	LT265/70R18 - 25.3
Alt Tire 1	275/65R18 - 25.7	275/65R18 - 25.7					LT265/70R17 - 26.1	LT265/70R17 - 26.1
Alt Tire 2	LT265/70R17 - 26.1	LT265/70R17 - 26.1					275/65R18 - 25.7	275/65R18 - 25.7
Alt Tire 3								
Alt Tire 4								
Alt Tire 5								
Alt Tire 6								
Alt Tire 7								
DAW Full Tank	2522	2522	2522	2522	2522	2522	2460	2460
DAW Empty Tank	2400	2400	2400	2400	2400	2400	2348	2348

Vehicle Description Report

Test Group: TFMXT03.51F1

ID Number	5292907	5292977
Displacement	3.5	3.5
Cert Code	TTFDCNNP0002	TTFDCNNP0003
Fuel Tank(s)	F8	F8
Carline	F150 PICKUP 4WD HEV	F150 PICKUP 4WD HEV
Wheel Configuration	Standard	Standard
Body Style	Super Crew	Super Crew
Wheelbase	157.0	157.0
Transcode Combo	GCC	GCC
Curb Weight	5883	5883
ETW	6000	6000
Loaded Weight LVW	6183	6183
ALVW-ETW	6500	6500
Adj. Loaded Weight	6642	6642
GVWR	7400	7400
GCWR	18400	18400
Min Axle Ratio	3.73	3.73
Max Axle Ratio	3.73	3.73
Min N/V Ratio	25.0	25.0
Max N/V Ratio	25.0	25.0
Emission Vehicle Class	LDT4	LDT4
Drive Code	Part-time 4-Wheel Drive	Part-time 4-Wheel Drive
Trans Type	Semi-Automatic	Semi-Automatic
Calibration Application	50ST	50ST
Min Tire Size	275/60R20 - 25	275/60R20 - 25
Max Tire Size	275/60R20 - 25	275/60R20 - 25
Alt Tire 1		
Alt Tire 2		
Alt Tire 3		
Alt Tire 4		
Alt Tire 5		
Alt Tire 6		
Alt Tire 7		
DAW Full Tank	2460	2460
DAW Empty Tank	2348	2348

SECTION 14

Request for Certification

Environmental & Safety Compliance

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

September 23rd, 2025

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

Dear Ms. Frame:

Ford Motor Company (Ford) herewith submits Part I Application for Certification for the 2026 model year full hybrid electric gasoline powered light-duty (LDT) contained in Ford's 50-State (Federal/CA) test group TFMXT03.51F1 and evaporative emission family TFMXR0295LDG. The test fuel used was Tier 3 E10.

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 + NO_x**	**CO**	**PM**	**US06 PM**	**HCHO**
Final Tier 3 Bin 50	150K	0.050	1.7	0.003	0.006	0.004

This test group meets the SFTP NMOG+NO_x Composite Family Emission Limit (FEL) of 0.050 g/mi and CO Composite standard of 4.2 g/mi.

In addition, this test group meets the Cold CO standard of 12.5 g/mi and the NMHC Family Emission Limit (FEL) of 0.4 g/mi as part of compliance plan to meet corporate fleet average cold NMHC standards.

This test group also meets the CH_4 standard of 0.030 g/mi and the N_2O standard of 0.010 g/mi for the FTP.

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

Tier 3	**Useful Life**	**Hot Soak + 2-day diurnal**	**Hot Soak + 3-day diurnal**	**Running Loss**	**ORVR**
Certification & In-Use Evaporative Standards	150K	0.500 grams per test	0.500 grams per test	0.05 g/mile	0.20 g/gallon

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. 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 Terry Cowher at 313-805-6360, 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

Environmental & Safety Compliance

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

September 23rd, 2025

Ms. Robin U. Lang
Emissions Certification and Compliance Division
Air Resources Board
4001 Iowa Avenue
Riverside, California 92507

Dear Ms. Lang:

Ford Motor Company (Ford) herewith submits Part I Application for Certification for the 2026 model year full hybrid electric gasoline powered light-duty (LDT) contained in Ford's 50-State (Federal/CA) test group TFMXT03.51F1 and evaporative emission family TFMXR0295LDG. The test fuel used was Tier 3 E10. 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 vehicle offered in California are as follows:

Certification & In-use FTP Standards (g/mi)	**Useful Life**	**NMOG + NO_x**	**CO**	**PM**	**US06 PM**	**HCHO**
LEVIII ULEV50	150K	0.050	1.7	0.003	0.006	0.004

This test group meets the SFTP NMOG+NO_x Composite Family Emission Limit (FEL) of 0.050 g/mi and CO Composite standard of 4.2 g/mi. In addition, this test group meets the Cold CO standard of 12.5 g/mi.

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

LEVIII	**Useful Life**	**Hot Soak + 2-day diurnal**	**Hot Soak + 3-day diurnal**	**Running Loss**	**ORVR**
Certification & In-Use Evaporative Standards	150K	0.500 grams per test	0.500 grams per test	0.05 g/mile	0.20 g/gallon

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 Terry Cowher at 313-805-6360, 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

CCAPS Manual Payment Request
(North America)

REF NO: 306179

NAME AND ADDRESS OF PAYEE	Employee	Ex-Employee / Board of Director	Mail Attachments	Separate Check	Special Handling
Environmental Protection Agency-MVECP U.S. Bank - Government Lockbox 979032 1300 Pennylvania 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 by ACH.				Y	
	Supplier Code	**CCAPS Plant Code**	**Due Date**	**Currency**	**Amount**
	GXHSA	10	ASAP	US	197,634.00

REASON FOR DISBURSEMENT

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

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

2026 MODEL YEAR CERTIFICATION FEES - (FORMS ATTACHED)

LOC CODE	GEN. LED.	SUB. ACCT.	SUB. DIV.	DEPT	PROD. CODE	BALANCE REFERENCE	MISC. REFERENCE	INVOICE #	INVOICE DATE	AMOUNT (Bracket Credits)	1099 Tax Type
5100	25A	00217		5100S910		F102A	EPA	306179	3/31/2025	197,634.00	N
									TOTAL	197,634.00	

Pre-requisites for Payment :

1. Requestors or Approvers to ensure the following
   - Receipt of Service
   - Price Validation
   - Supported by invoice or other documentation
2. Check if payment item is on Uses of Manual Payment Requests
3. For Finance Approval follow Corporate Approval Authorities - Method of Payment

TYPE OF INVOICE:		MANUAL PAYMENT REQUEST CATEGORY (use drop down with Alt+down arrow key):	Legal Matters· Environmental Fees

Requestor

	CDS ID	Sign	Date
Preparer/Requestor	TOLIVER		3/31/25

Operations Approval - Receipt of Service

	CDS ID	Sign	Date
Approver	LMERRIT2	DocuSigned by: Lawrence Merritt DF6ED4749EAC46B...	3/31/2025

Approvals per Corporate Approval Authorities - Method of Payment

Payment Item is on Uses of Manual Payment Requests

	CDS ID	Sign	Date
Finance LL5+ or Plant Controller (LL6) Unlimited	PBLANCAS	DocuSigned by: Patricia Blancas Ruiz 98D37B2D5DA0498...	3/31/25
Finance LL6 < $250,000			

Payment Item is not on Uses of Manual Payment Requests

	CDS ID	Sign	Date
Finance LL4+ Unlimited			
Finance LL5 < $25,000			

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

3061179

PA_MV CP_v

S A Fee Form

Terry Cowher 313-805-6360
TG - TFMXT03.51F1

Help and EPA nstructions

Tracking Information
Pay.gov Tracking ID: 27MSSQ7D

* Required Field

Agency Tracking ID: 77004236187

General Information

Date: 03/31/2025

Process Code *

Submit New Fee Filing Form

Manufacturer Code *

FMX

Manufacturer Name *

Ford Motor Company

Contact Name *

Tin Oliver

Contact Email Address *

toliver@comcast.net

Contact Phone *

313-323-8938

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 3 , 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 *

TFMXT03.51F1

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

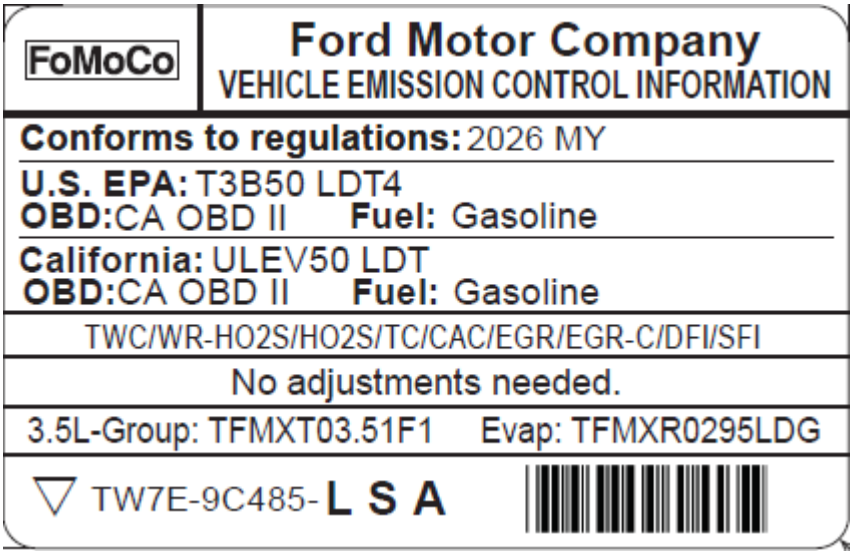
EPA Form Number 3520-29
OMB Control No. 2060-0545
Approval expires 7/31/2027
The public reporting and recordkeeping burden for this collection of information is estimated to average 12 minutes per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, 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 16

Confidential Information

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/WR-HO2S/HO2S/TC/CAC/EGR/EGR-C/DFI/SFI
No adjustments needed.
3.5L-Group: TFMXT03.51F1 Evap: TFMXR0295LDG
TW7E-9C485-L S A

SECTION 18

Revisions

APPLICATION REVISIONS

TFMXT03.51F1

NO.	DATE	PAGE(S)	DESCRIPTION

Application for Certification

Part 2