

Certification Summary Information Report

Manufacturer	Landi Renzo USA Corporation	Manufacturer Code	LDR
Test Group	TLDRD06.86CH	Evaporative/Refueling Family	TLDRR0360NHJ
Certificate Number	TLDRD06.86CH-004	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	11/11/2025 01:59:21 PM
Model Year	2026		

Test Group Information

CSI Type	New	Running Change Reference Number	--
GHG Exempt Status	Small Business Administration Exemption		

Drive Sources and Fuel(s)

Drive Source #1: Combustion Engine

Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator
CNG	Multipoint/sequential fuel injection	No
Gasoline	Multipoint/sequential fuel injection	No

Hybrid Indicator	No	Rechargeable Energy Storage System Indicator	--
Multiple Fuel Storage	Fuels Stored Separately	Off-board Charge Capable Indicator	--
Multiple Fuel Combustion	Fuels Combusted Separately	EPA Vehicle Class	HDV1
Fuel Cell Indicator	--	Federal Clean Fuel Vehicle Standard	--
Federal Clean Fuel Vehicle	No	California Partial Zero Emissions Vehicle Indicator	--
Federal Clean Fuel Vehicle ILEV	--	Durability Group Equivalency Factor	1.0
Durability Group Name	TLDRGPCGN6CH	Certification Region Code(s)	FA
Reduced Fee Test Group	Yes		
Complies with HD GHG 2b/3 regulations?	Yes		
Introduction into Commerce Date	11/20/2025	CAP2000 Conditional Certificate?	No
Independent Commercial Importer?	No	Alternative Fuel Converter Certificate?	Yes
SFTP Federal Composite Compliance Identifier	Not Applicable	SFTP Tier 2 Composite CO Option	No
SFTP LEV-III Composite Compliance Indicator	Yes		
OBD Compliance Type	Federal	OBD Demonstration Vehicle Test Group	PLDRD06.86BC
Test Group OBD Compliance Level	Full - no deficiencies	Number of Test Group OBD Deficiencies	0
OBD Deficiencies Comments	--		
Mfr Test Group Comments	Landi Renzo qualifies as a small manufacturer based upon the number of employees it and its affiliated companies employ in the heavy duty truck manufacturing category (SBA NAICS code336120) being less than 1500 employees and therefore is not subject to the greenhouse gas standards §1037.105 through 1037.106. We will include in the VECI label for this test group the following statement - THIS VEHICLE IS EXCLUDED UNDER 40 CFR 1037.150(c).		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group	TLDRD06.86CH	Evaporative/Refueling Family	TLDRR0360NHJ				
Evaporative/Refueling Family Information							
Evaporative Summary Information Type	New	Submission/Correction Date	10/31/2025 04:10:11 PM				
Integrated ORVR?	Yes	Fuel(s)	Gasoline, CNG				
Multiple Fuel Storage	Fuels Stored Separately						
Bladder Fuel Tank?	No						
Fuel Tank Material	Other	Fuel Tank Material Description	Type 1, 2, 3, 4 Tanks				
Fill Pipe Seal Type	Mechanical seal						
Air Intake System Vapor Storage Device?	Yes	Air Intake System Vapor Storage Device Description	Hydrocarbon Trap				
Fuel System Vapor Storage Canister?	Yes	Other Vapor Storage	1x3.7L HA + 1x1.8L HA +5x0.48L				
Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)	360	Number of Primary Canisters	2				
Number of Bleed Canisters	5	Bleed Canister Total Working Capacity (grams)	2				
Mfr Evaporative/Refueling Family Comments	Fuel Tank Material and Fill Pipe Seal as listed above are for CNG tanks(s). Gasoline tank and fill pipe seal are OEM. No changes have been made to the gasoline evaporative system.						
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				
TLDRR0360NHJ-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
Landi Renzo USA Corporation	1 - Landi Renzo USA	130 - F250 Pickup 4WD	Federal	Part-time 4-Wheel Drive	Semi-Automatic	10	Yes
Landi Renzo USA Corporation	1 - Landi Renzo USA	125 - F250 Bed Delete 4WD	Federal	Part-time 4-Wheel Drive	Semi-Automatic	10	Yes
Landi Renzo USA Corporation	1 - Landi Renzo USA	124 - F250 Bed Delete 2WD	Federal	2-Wheel Drive, Rear	Semi-Automatic	10	Yes
Landi Renzo USA Corporation	1 - Landi Renzo USA	115 - F250 Pickup 2WD	Federal	2-Wheel Drive, Rear	Semi-Automatic	10	Yes

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Test Group	TLDRD06.86CH	Evaporative/Refueling Family	TLDRR0360NHJ	
Engine Description				
Hybrid Type	--	Hybrid Description	--	
Engine Type	4-Stroke Spark Ignition	Mfr Engine Description	--	
Engine Block Arrangement	V-shaped engine	Mfr Engine Block Arrangement Description	--	
Camless Valvetrain Indicator	No	Oil Viscosity/Classification	SAE 5W30 / ILSAC GF-6	
Number of Cylinders/Rotors	8	Mechanically Variable Compression Ratio Indicator	N	
After Treatment Device(s) (ATD)				
ATD Number	ATD Type	ATD Precious Metal	Substrate Material	Substrate Construction
1	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
2	Three-way catalyst	Palladium + Rhodium	Ceramic	Monolith
Mfr After Treatment Device (ATD) Comments				
2TWC				
Direct Ozone Reduction (DOR) Device				
Not Equipped				
Mfr Emission Control Device Comments				
--				
Engine Configuration Number 1				
Engine Displacement (liters)	6.8	Engine Rated Horsepower	405	
Number of Inlet Valves Per Cylinder	1	Number of Exhaust Valves Per Cylinder	1	
Air Aspiration Method	Naturally Aspirated	Number of Air Aspiration Devices	--	
Air Aspiration Device Configuration	--	Charge Air Cooler Type	N/A	
Air Aspiration Drive Method(s)	--			
Cylinder Deactivation	No			
Cylinder Deactivation Description	--			
Variable Valve Timing	Yes			
Variable Valve Timing System Description	oil pressure actuated			
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 oxygen	Air/Fuel Sensor # 1 Description	--	
Air/Fuel Sensor # 2 Type	Heated oxygen	Air/Fuel Sensor # 2 Description	--	
Air/Fuel Sensor # 3 Type	Other	Air/Fuel Sensor # 3 Description	WR-HO2S	
Air/Fuel Sensor # 4 Type	Other	Air/Fuel Sensor # 4 Description	WR-HO2S	
Mfr Air/Fuel Sensor Comments	--			
Exhaust Gas Recirculation	No	Cooled Exhaust Gas Recirculation	No	
EGR Type	--	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	--			

Certification Summary Information Report

Test Group		TLDRD06.86CH				Evaporative/Refueling Family		TLDRR0360NHJ		
Official Test Numbers										
Test Group						EPA City	EPA City	EPA	EPA	
Fuel	FTP	US06	SC03	Cold CO	Highway	Litmus Value	Litmus Threshold	Highway Litmus Value	Highway Litmus Threshold	CREE Weighting Factor
CNG	PLDR10083341	SLDR10090654	--	--	PLDR10083340	--	--	--	--	--
Gasoline	--	--	--	--	--	--	--	--	--	--
SFTP LEV-III Official Test Numbers										
Test Group Fuel		FTP		US06		SC03				
CNG		PLDR10083341		SLDR10090654		--				

Certification Summary Information Report

Test Group	TLDRD06.86CH	Evaporative/Refueling Family	TLDRR0360NHJ																					
Emission Data Vehicle Information																								
Vehicle ID / Configuration	1FT8W3BA0REC75697 / 0	Manufacturer Vehicle Configuration Number	0																					
Original Test Group Name	SLDRD06.86CH	Original Evaporative/Refueling Family	SLDRR0360NHJ																					
Original Test Vehicle Model Year	2025																							
Vehicle Model																								
Represented Test Vehicle Make	Ford	Represented Test Vehicle Model	F350																					
Leak Family Details																								
Leak Family Identifier	--	Leak Family Name	--																					
Drive Sources and Fuel System Details																								
<table><tr><td>Drive Source and Fuel#</td><td>Drive Source</td><td>Fuel</td></tr><tr><td>1</td><td>Combustion Engine</td><td>CNG, Gasoline</td></tr></table>				Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	CNG, Gasoline															
Drive Source and Fuel#	Drive Source	Fuel																						
1	Combustion Engine	CNG, Gasoline																						
Hybrid Indicator	No																							
Multiple Fuel Storage	Fuels Stored Separately	Multiple Fuel Combustion	Fuels Combusted Separately																					
Fuel Cell Indicator	--	Rechargeable Energy Storage System Indicator	--																					
Rechargeable Energy Storage System	--	Rechargeable Energy Storage System, if 'Other'	--																					
Off-board charge Capable Indicator	--																							
Odometer Correction -- Initial	0	Odometer Correction Factor	1																					
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor																							
Odometer Correction Units	Miles																							
Engine Code	1	Rated Horsepower	405																					
Displacement (liters)	6.8																							
Air Aspiration Method	Naturally Aspirated	Air Aspiration Method, if 'Other'																						
Number of Air Aspiration Devices	--	Air Aspiration Device Configuration	--																					
Charge Air Cooler Type	N/A	Drive Mode While Testing	2-Wheel Drive, Rear																					
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)																					
Curb Weight (lbs)	7064	Equivalent Test Weight (pounds)	9500																					
GVWR (lbs)	11900	N/V Ratio	24.2																					
Axle Ratio	4.3																							
Transmission Type	Semi-Automatic	# of Transmission Gears	10																					
Transmission Lockup	Yes	Creeper Gear	No																					
Dynamometer Coefficients:																								
<table><tr><td colspan="3">Target Coefficients</td><td colspan="3">Set Coefficients</td><td rowspan="3">EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients</td></tr><tr><td>Coefficient Category</td><td>A (lbf)</td><td>B (lbf/mph)</td><td>C (lbf/mph**2)</td><td>A (lbf)</td><td>B (lbf/mph)</td><td>C (lbf/mph**2)</td></tr><tr><td>US06</td><td>81.66</td><td>0.60619</td><td>0.082138</td><td>33.595</td><td>1.00112</td><td>0.073533</td></tr></table>				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)	US06	81.66	0.60619	0.082138	33.595	1.00112	0.073533
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)																	
US06	81.66	0.60619	0.082138	33.595	1.00112		0.073533																	
Emission Control Device Comments	--																							

Certification Summary Information Report

Test Group	TLDRD06.86CH	Evaporative/Refueling Family	TLDRR0360NHJ
Manufacturer Test Vehicle Comments	This is an aftermarket conversion to dual fuel, CNG or gasoline. The emission data vehicle is a 6.8L F350 Super Crew from the Ford test group RFMXD06.87BC		

Certification Summary Information Report

Test Group	TLDRD06.86CH	Evaporative/Refueling Family	TLDRR0360NHJ
Test #	SLDR10090654	Test Procedure	90 - US06
Exhaust Test # for this Evap Test	--	Test Fuel Type	41 - CNG
Test Date	04/17/2025	Fuel	CNG
Fuel Batch ID	DTE029	Fuel Calibration Number	1
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)	DF Type	EPA Assigned
Verify Test Lab ID	Referenced Test Lab: RII/1		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	6510	Odometer Units	M
4WD Test Dyno	Yes	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)
METHANE (CH4 - Methane)	0.29595	--
CO (Carbon Monoxide)	15.39412	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0	--
DT-EER (Drive Trace Energy Economy Rating)	0	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0	--
MFR FE (Manufacturer Fuel Economy)	11.7978	11.7978
NOX (Nitrogen Oxide)	0.28785	--
HC-NM (Non-methane Hydrocarbon)	0.00511	--
NMOG (Non-methane organic gases)	0.00511	--
HC-TOTAL (Total Hydrocarbon)	0.29436	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	693.03534	--

Manufacturer Test Comments

This is an aftermarket conversion to dual fuel, CNG or gasoline. The emission data vehicle is a 6.8L 2024 F350 from the Ford test group RFMXD06.87BC. The emission data vehicle has been tested with an equivalent test weight of 9500 lbs. An NMOG/NMHC factor of 1 was used to arrive at a test result for NMOG.

Certification Summary Information Report

Test Group		TLDRD06.86CH				Evaporative/Refueling Family				TLDRR0360NHJ		
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 HD Class 2b Bin 170	CO	15.3941	--	--	--	0.768	--	16.162	999.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG	0.0051	--	1	--	0.0376	--	0.043	999.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NOX	0.2878	--	--	--	0.05	--	0.338	999.999	Pass

Certification Summary Information Report

Test Group	TLDRD06.86CH	Evaporative/Refueling Family	TLDRR0360NHJ
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Emission Data Vehicle Information

Vehicle ID / Configuration	1FTBF2AA9PED51593 / 4	Manufacturer Vehicle Configuration Number	0
Original Test Group Name	PLDRD06.87BC	Original Evaporative/Refueling Family	PLDRR0250NHJ
Original Test Vehicle Model Year	2023		

Vehicle Model

Represented Test Vehicle Make	Ford	Represented Test Vehicle Model	F250
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Leak Family Details

Leak Family Identifier	--	Leak Family Name	--
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Drive Sources and Fuel System Details

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

Hybrid Indicator	No		
Multiple Fuel Storage	Fuels Stored Separately	Multiple Fuel Combustion	Fuels Combusted Separately
Fuel Cell Indicator	--	Rechargeable Energy Storage System Indicator	--
Rechargeable Energy Storage System	--	Rechargeable Energy Storage System, if 'Other'	--
Off-board charge Capable Indicator	--		
Odometer Correction -- Initial	0	Odometer Correction Factor	1
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Miles		
Engine Code	1	Rated Horsepower	405
Displacement (liters)	6.8		
Air Aspiration Method	Naturally Aspirated	Air Aspiration Method, if 'Other'	
Number of Air Aspiration Devices	--	Air Aspiration Device Configuration	--
Charge Air Cooler Type	N/A	Drive Mode While Testing	2-Wheel Drive, Rear
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)
Curb Weight (lbs)	5751	Equivalent Test Weight (pounds)	11000
GVWR (lbs)	10000	N/V Ratio	26.2
Axle Ratio	3.73		
Transmission Type	Semi-Automatic	# of Transmission Gears	10
Transmission Lockup	Yes	Creep Gear	No

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	84.53	0.29399	0.055611	41.749	0.0881	0.047791	31.8
US06	84.53	0.29399	0.055611	41.749	0.0881	0.047791	N/A

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Certification Summary Information Report

Test Group	TLDRD06.86CH	Evaporative/Refueling Family	TLDRR0360NHJ
Test #	PLDR10083341	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	41 - CNG
Test Date	11/03/2023	Fuel	CNG
Fuel Batch ID	DTE028	Fuel Calibration Number	1
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)	DF Type	EPA Assigned
Verify Test Lab ID	Referenced Test Lab: RII/1		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3206	Odometer Units	M
4WD Test Dyno	Yes	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)
METHANE (CH4 - Methane)	0.04076	--
CO (Carbon Monoxide)	0.4844	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0	--
DT-EER (Drive Trace Energy Economy Rating)	0	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0	--
MFR FE (Manufacturer Fuel Economy)	10.75518	10.75518
NOX (Nitrogen Oxide)	0.01289	--
HC-NM (Non-methane Hydrocarbon)	0.00128	--
NMOG (Non-methane organic gases)	0.00128	--
HC-TOTAL (Total Hydrocarbon)	0.04582	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	612

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	610.88196	--

Manufacturer Test Comments

The emission data vehicle is a 2023 6.8L F250 from the Ford test group PFMXD06.86BC and tested to simulate a 2023 6.8L F350 4x4 from the test group PFMXD06.87BC. The emission data vehicle has been tested with an ETW of 11000 lbs. NMOG result is calculated using a factor of 1.0 times NMHC result.

Certification Summary Information Report

Test Group		TLDRD06.86CH			Evaporative/Refueling Family					TLDRR0360NHJ		
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 HD Class 2b Bin 170	CO	0.48	--	--	--	0.768	--	1.2	4.2	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	CO-COMP	5.4	--	--	--	--	--	5	12	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG	0.0013	--	1	--	0.0376	--	0.039	999.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG+NOX	0.0142	--	--	--	--	--	0.102	0.170	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG+NOX-COMP	0.1798	--	--	--	--	--	0.18	0.450	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NOX	0.0129	--	--	--	0.05	--	0.063	999.999	Pass

Certification Summary Information Report

Test Group	TLDRD06.86CH	Evaporative/Refueling Family	TLDRR0360NHJ
Test #	PLDR10083340	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	41 - CNG
Test Date	11/03/2023	Fuel	CNG
Fuel Batch ID	DTE028	Fuel Calibration Number	1
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)	DF Type	EPA Assigned
Verify Test Lab ID	Referenced Test Lab: RII/1		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	3217	Odometer Units	M
4WD Test Dyno	Yes	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)
METHANE (CH4 - Methane)	0.00314	--
CO (Carbon Monoxide)	0.49636	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0	--
DT-EER (Drive Trace Energy Economy Rating)	0	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0	--
MFR FE (Manufacturer Fuel Economy)	16.59406	16.59406
NOX (Nitrogen Oxide)	0.00773	--
HC-NM (Non-methane Hydrocarbon)	0	--
NMOG (Non-methane organic gases)	0	--
HC-TOTAL (Total Hydrocarbon)	0.00239	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	0	361

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	359.63336	--

Manufacturer Test Comments

The emission data vehicle is a 2023 6.8L F250 from the Ford test group PFMXD06.86BC and tested to simulate a 2023 6.8L F350 4x4 from the test group PFMXD06.87BC. The emission data vehicle has been tested with an ETW of 11000 lbs. NMOG result is calculated using a factor of 1.0 times NMHC result.

Certification Summary Information Report

Test Group		TLDRD06.86CH			Evaporative/Refueling Family					TLDRR0360NHJ		
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 HD Class 2b Bin 170	NMOG	0	--	1	--	0.0376	--	0.038	999.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG+NOX	0.0077	--	--	--	--	--	0.095	0.170	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NOX	0.0077	--	--	--	0.05	--	0.058	999.999	Pass

Fuel Properties

Fuel Batch ID	DTE028	Fuel Calibration Number	1
Test Fuel Type	41 - CNG	Fuel Batch Calibration Date	10/11/2023
Fuel Batch Calibration Effective Date	10/11/2023	Fuel Batch Calibration Ineffective Date	10/11/2024
Carbon Weight Fraction NMHC	0.801	Carbon Weight Fraction HC	0.746
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	20.025	Fuel Specific Gravity	0.587
Fuel Ethanol Volume Percent (%)	--	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	21476
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.747	Weight Fraction CO2	0.005
Fuel Batch ID	DTE029	Fuel Calibration Number	1
Test Fuel Type	41 - CNG	Fuel Batch Calibration Date	04/16/2025
Fuel Batch Calibration Effective Date	04/16/2025	Fuel Batch Calibration Ineffective Date	04/16/2026
Carbon Weight Fraction NMHC	0.801	Carbon Weight Fraction HC	0.746
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	20.025	Fuel Specific Gravity	0.587
Fuel Ethanol Volume Percent (%)	--	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	21476
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.747	Weight Fraction CO2	0.005

Certification Summary Information Report

Test Group		TLDRD06.86CH			Evaporative/Refueling Family			TLDRR0360NHJ		
Consolidated List of Standards										
Exhaust Standards										
Cert Region		Federal			Cert/In-Use Code			Cert		
Vehicle Class		HDV1 (Federal HD chassis Class 2b GVW 8501-10000)			Standard Level			Federal Tier 3 HD Class 2b Bin 170		
Fuel		CNG			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	--	--	--	--	--	--	0.768	999.999	
150,000 miles	NMOG	--	--	1	--	--	--	0.0376	999.999	
150,000 miles	NOX	--	--	--	--	--	--	0.05	999.999	
Cert Region		Federal			Cert/In-Use Code			Cert		
Vehicle Class		HDV1 (Federal HD chassis Class 2b GVW 8501-10000)			Standard Level			Federal Tier 3 HD Class 2b Bin 170		
Fuel		CNG			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	--	--	--	--	--	--	0.768	4.2	
150,000 miles	CO-COMP	--	--	--	--	--	--	--	12	
150,000 miles	NMOG	--	--	1	--	--	--	0.0376	999.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.170	
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	--	0.450	
150,000 miles	NOX	--	--	--	--	--	--	0.05	999.999	
Cert Region		Federal			Cert/In-Use Code			Cert		
Vehicle Class		HDV1 (Federal HD chassis Class 2b GVW 8501-10000)			Standard Level			Federal Tier 3 HD Class 2b Bin 170		
Fuel		CNG			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	--	--	--	0.0376	999.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.170	
150,000 miles	NOX	--	--	--	--	--	--	0.05	999.999	

Certification Summary Information Report

Test Group		TLDRD06.86CH		Evaporative/Refueling Family		TLDRR0360NHJ	
Evaporative/Refueling Standards							
Evaporative/Refueling Family		TLDRR0360NHJ		Cert Region		Federal	
Cert/In-Use Code		Cert		Standard Level		Federal Tier 3 Evap	
Test Procedure		Federal fuel 3-day evap					
Fuel		Useful Life		Emission Name		Rounded Result	
CNG		150,000 miles		HC-TOTAL		Std	
						Add DF	
				--		0.600	
						--	
Evaporative/Refueling Family		TLDRR0360NHJ		Cert Region		Federal	
Cert/In-Use Code		Cert		Standard Level		Federal Tier 3 Evap	
Test Procedure		2-day evap					
Fuel		Useful Life		Emission Name		Rounded Result	
CNG		150,000 miles		HC-TOTAL		Std	
						Add DF	
				--		0.600	
						--	

Certification Summary Information Report

Test Group		TLDRD06.86CH	Evaporative/Refueling Family		TLDRR0360NHJ
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		TLDRD06.86CH	Evaporative/Refueling Family		TLDRR0360NHJ
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	

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Test Group		TLDRD06.86CH	Evaporative/Refueling Family		TLDRR0360NHJ
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		