

Certification Summary Information Report

Manufacturer	Oshkosh Corporation	Manufacturer Code	OSH
Test Group	TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF
Certificate Number	TOSHD02.0NGF-001	CARB Executive Order #	--
Certificate Issue Date	09/22/2025	Certificate Revision Date	--
Certificate Effective Date	09/22/2025	Conditional Certificate	No
CSI Revision #	--	CSI Submission/Revision Date	09/18/2025 11:50:44 AM
Model Year	2026		

Test Group Information

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

Drive Sources and Fuel(s)

Drive Source #1: Combustion Engine

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

Hybrid Indicator	No		
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	No
Multiple Fuel Combustion	--	Off-board Charge Capable Indicator	No
Fuel Cell Indicator	No	EPA Vehicle Class	HDV1
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	TOSHGPNNNEG5	Durability Group Equivalency Factor	1
Reduced Fee Test Group	No	Certification Region Code(s)	FA, CA
Complies with HD GHG 2b/3 regulations?	Yes		
Introduction into Commerce Date	12/01/2025	CAP2000 Conditional Certificate?	No
Independent Commercial Importer?	No	Alternative Fuel Converter Certificate?	No
SFTP Federal Composite Compliance Identifier	Tier 3	SFTP Tier 2 Composite CO Option	No
SFTP LEV-III Composite Compliance Indicator	Yes		
OBD Compliance Type	CARB	OBD Demonstration Vehicle Test Group	SOSHD02.0NGF
Test Group OBD Compliance Level	Partial - with deficiencies	Number of Test Group OBD Deficiencies	2
OBD Deficiencies Comments	CARB OBD approval issued 9/12/2025 (reference letter no. E-25-247); deficiencies start-stop monitoring and catalyst reheating strategy monitoring		
Mfr Test Group Comments	USPS DELIVERY VEHICLE 2WD AND USPS DELIVERY VEHICLE AWD; correction: Basic Fuel Metering System		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group	TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF				
Evaporative/Refueling Family Information							
Evaporative Summary Information Type	New	Submission/Correction Date	06/20/2025 10:44:23 AM				
Integrated ORVR?	Yes	Fuel(s)	Gasoline				
Multiple Fuel Storage	--						
Bladder Fuel Tank?	No						
Fuel Tank Material	Plastic	Fuel Tank Material Description	Polyethylene Composite				
Fill Pipe Seal Type	Liquid seal						
Air Intake System Vapor Storage Device?	Yes	Air Intake System Vapor Storage Device Description	Carbon-based AIS HC trap				
Fuel System Vapor Storage Canister?	Yes	Other Vapor Storage	Internal Bleed				
Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)	200	Number of Primary Canisters	1				
Number of Bleed Canisters	1	Bleed Canister Total Working Capacity (grams)	2				
Mfr Evaporative/Refueling Family Comments	Evaporative system same as Ford F-150 (see _FMXR0200GDG); AIS is derived from Ford Escape (see PFMXT02.02Y1)						
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	Bleed canister is internal to main canister shell. No external bleed canister. Bleed test "Method A" (bag method)						
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				
TOSHR0200NGF-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
Oshkosh Corporation	1 - Oshkosh On-Road Heavy-Duty	213 - Postal Delivery	Federal	2-Wheel Drive, Front	Automatic	8	Yes
Oshkosh Corporation	1 - Oshkosh On-Road Heavy-Duty	223 - Postal Delivery AWD	Federal	All Wheel Drive	Automatic	8	Yes
Oshkosh Corporation	1 - Oshkosh On-Road Heavy-Duty	223 - Postal Delivery AWD	California + CAA Section 177 states	All Wheel Drive	Automatic	8	Yes
Oshkosh Corporation	1 - Oshkosh On-Road Heavy-Duty	213 - Postal Delivery	California + CAA Section 177 states	2-Wheel Drive, Front	Automatic	8	Yes
Engine Description							
Hybrid Type	--	Hybrid Description	--				
Engine Type	4-Stroke Spark Ignition	Mfr Engine Description	--				
Engine Block Arrangement	Inline	Mfr Engine Block Arrangement Description	--				
Camless Valvetrain Indicator	No	Oil Viscosity/Classification	5W-30 API SP				
Number of Cylinders/Rotors	4	Mechanically Variable Compression Ratio Indicator	N				

Certification Summary Information Report

Test Group	TOSHD02.0NGF	Evaporative/Refueling Family			TOSHR0200NGF						
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		One close-coupled + one underbody catalysts									
Direct Ozone Reduction (DOR) Device		Not Equipped									
Mfr Emission Control Device Comments		--									
Engine Configuration Number 1											
Engine Displacement (liters)		2.0		Engine Rated Horsepower		232					
Number of Inlet Valves Per Cylinder		2		Number of Exhaust Valves Per Cylinder		2					
Air Aspiration Method		Turbocharged		Number of Air Aspiration Devices		1					
Air Aspiration Device Configuration		Single		Charge Air Cooler Type		Air					
Air Aspiration Drive Method(s)		Mechanical									
Cylinder Deactivation		No									
Cylinder Deactivation Description		--									
Variable Valve Timing		Yes									
Variable Valve Timing System Description		VCT; Hydraulically actuated; intake/exhaust									
Variable Valve Lift?		No									
Variable Valve Lift System Description		--									
Number of Knock Sensors		1		Number of Air/Fuel Sensors		2					
Air/Fuel Sensor # 1 Type		Heated oxygen		Air/Fuel Sensor # 1 Description		--					
Air/Fuel Sensor # 2 Type		Other		Air/Fuel Sensor # 2 Description		WR-HO2S					
Mfr Air/Fuel Sensor Comments		--									
Exhaust Gas Recirculation		Yes		Cooled Exhaust Gas Recirculation		Yes					
EGR Type		Electronic/Electric		Exhaust Gas Recirculation Description if 'Other'		--					
Closed Loop Air Injection System		--									
Air Injection Type		--		Air Injection Type if 'Other'		--					
Mfr Engine Configuration Comments		TWC(2)/HO2S/WR-HO2S/CAC/TC/EGR/EGRC/DFI/SFI									
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	SOSH91005766	SOSH91005840	SOSH10089080	--	SOSH91005770	--	228.2	--	286.1	--	

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Test Group	TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF
SFTP LEV-III Official Test Numbers			
Test Group Fuel	FTP	US06	SC03
Gasoline	SOSH91005766	SOSH91005840	SOSH10089080

Certification Summary Information Report

Test Group	TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF					
Emission Data Vehicle Information								
Vehicle ID / Configuration	DIA-66 / 0	Manufacturer Vehicle Configuration Number	1					
Original Test Group Name	SOSHD02.0NGF	Original Evaporative/Refueling Family	SOSHR0200NGF					
Original Test Vehicle Model Year	2025							
Vehicle Model								
Represented Test Vehicle Make	Oshkosh	Represented Test Vehicle Model	Postal Delivery AWD					
Leak Family Details								
Leak Family Identifier	--	Leak Family Name	--					
Drive Sources and Fuel System Details								
	<table border="1"> <thead> <tr> <th>Drive Source and Fuel#</th> <th>Drive Source</th> <th>Fuel</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Combustion Engine</td> <td>Gasoline</td> </tr> </tbody> </table>	Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	Gasoline	
Drive Source and Fuel#	Drive Source	Fuel						
1	Combustion Engine	Gasoline						
Hybrid Indicator	No							
Multiple Fuel Storage	--	Multiple Fuel Combustion	--					
Fuel Cell Indicator	--	Rechargeable Energy Storage System Indicator	--					
Rechargeable Energy Storage System	--	Rechargeable Energy Storage System, if 'Other'	--					
Off-board charge Capable Indicator	--							
Odometer Correction -- Initial	0	Odometer Correction Factor	1					
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles							
Odometer Correction Units	Miles							
Engine Code	G25B203P150R05	Rated Horsepower	232					
Displacement (liters)	2							
Air Aspiration Method	Turbocharged	Air Aspiration Method, if 'Other'						
Number of Air Aspiration Devices	1	Air Aspiration Device Configuration	Single					
Charge Air Cooler Type	Air	Drive Mode While Testing	All Wheel Drive					
Shift Indicator Light Usage	Not equipped	Aged Emission Components	150,000 (mi)					
Curb Weight (lbs)	5860	Equivalent Test Weight (pounds)	7500					
GVWR (lbs)	8700	N/V Ratio	29.3					
Axle Ratio	3.81							
Transmission Type	Automatic	# of Transmission Gears	8					
Transmission Lockup	Yes	Creep Gear	No					

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Test Group		TOSHD02.0NGF			Evaporative/Refueling Family		TOSHR0200NGF	
Dynamometer Coefficients:								
Target Coefficients				Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients	
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)		
City/Highway/Evap	47.24	0.9141	0.061303	19.8	0.80492	0.059809	32.8	
Cold CO	47.24	0.9141	0.061303	19.8	0.80492	0.059809	N/A	
US06	47.24	0.9141	0.061303	19.8	0.80492	0.059809	N/A	
Emission Control Device Comments		TWC/WR-HO2S/HO2S/TC/CAC/EGR/EGRC/DFI/SFI						
Manufacturer Test Vehicle Comments		Vehicle dedicated to evaporative emissions						

Certification Summary Information Report

Test Group	TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF
Test #	SOSH10085358	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/26/2024	Fuel	N/A
Fuel Batch ID	B2Evap	Fuel Calibration Number	525
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	Roush Lab B2		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4217	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	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	568.9	--
FE BAG 1 (Bag 1 Fuel Economy)	15.2	15.2
CO2 BAG 2 (Bag 2 Carbon Dioxide)	500.46	--
FE BAG 2 (Bag 2 Fuel Economy)	17.4	17.4
CO2 BAG 3 (Bag 3 Carbon Dioxide)	521.81	--
FE BAG 3 (Bag 3 Fuel Economy)	16.6	16.6
METHANE (CH4 - Methane)	0.02518	--
CO (Carbon Monoxide)	1.16527	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.0748	--
DT-EER (Drive Trace Energy Economy Rating)	-1.1694	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.3624	--
MFR FE (Manufacturer Fuel Economy)	16.66	16.66
NOX (Nitrogen Oxide)	0.04831	--
N2O (Nitrous Oxide)	0.0162	--
HC-NM (Non-methane Hydrocarbon)	0.02349	--
NMOG (Non-methane organic gases)	0.025839	--
HC-TOTAL (Total Hydrocarbon)	0.048104	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	999.999	999

Certification Summary Information Report

Test Group	TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF
	Test Result Name	Unrounded Test Result	Verify Calculated CO2
	Carbon dioxide	520.518	--
Manufacturer Test Comments	Postal Delivery AWD; FTP for 2-day Evap; E10 fuel; Roush test number: FTP75_20240326_06		

Certification Summary Information Report

Test Group	TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF
Test #	SOSH10085359	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/21/2024	Fuel	N/A
Fuel Batch ID	B2Evap	Fuel Calibration Number	525
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	Roush Lab B2		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4181	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	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	566.38	--
FE BAG 1 (Bag 1 Fuel Economy)	15.27	15.27
CO2 BAG 2 (Bag 2 Carbon Dioxide)	485.99	--
FE BAG 2 (Bag 2 Fuel Economy)	17.91	17.91
CO2 BAG 3 (Bag 3 Carbon Dioxide)	519.09	--
FE BAG 3 (Bag 3 Fuel Economy)	16.71	16.71
METHANE (CH4 - Methane)	0.01287	--
CO (Carbon Monoxide)	0.77186	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-1.9465	--
DT-EER (Drive Trace Energy Economy Rating)	-1.659	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-2.2577	--
MFR FE (Manufacturer Fuel Economy)	16.97	16.97
NOX (Nitrogen Oxide)	0.03647	--
N2O (Nitrous Oxide)	0.01595	--
HC-NM (Non-methane Hydrocarbon)	0.02796	--
NMOG (Non-methane organic gases)	0.03075	--
HC-TOTAL (Total Hydrocarbon)	0.04054	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	999.999	999

Certification Summary Information Report

Test Group	TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF						
	<table border="1"> <thead> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated CO2</th> </tr> </thead> <tbody> <tr> <td>Carbon dioxide</td> <td>511.75</td> <td>--</td> </tr> </tbody> </table>	Test Result Name	Unrounded Test Result	Verify Calculated CO2	Carbon dioxide	511.75	--		
Test Result Name	Unrounded Test Result	Verify Calculated CO2							
Carbon dioxide	511.75	--							
Manufacturer Test Comments	Postal Delivery AWD; FTP for 3-day Evap; Roush test number: FTP75_20240321_06								
Test #	SOSH10085360	Test Procedure	34 - Federal fuel 3-day evap						
Exhaust Test # for this Evap Test	SOSH10085359	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)						
Test Date	03/21/2024	Fuel	Gasoline						
Fuel Batch ID	B2Evap	Fuel Calibration Number	525						
Vehicle Class	N/A	DF Type	Mfr. Determined						
Verify Test Lab ID	Roush Lab B2								
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)								
Test Start Odometer Reading	4210	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	Yes						
Test Results	<table border="1"> <thead> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated FE Equivalent Value (miles per gallon)</th> </tr> </thead> <tbody> <tr> <td>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</td> <td>0.38581</td> <td>--</td> </tr> </tbody> </table>			Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.38581	--
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)							
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.38581	--							
Manufacturer Test Comments	Postal Delivery AWD; Evap HS+3-day; test number Roush 02003150/02003151								
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	0.3858	0	0.386	0.6	Pass	
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.3858	0	0.386	0.6	Pass	

Test Group	TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF
Test #	SOSH10085361	Test Procedure	23 - 2-day evap
Exhaust Test # for this Evap Test	SOSH10085358	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/26/2024	Fuel	Gasoline
Fuel Batch ID	B2Evap	Fuel Calibration Number	525
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	Roush Lab B2		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	4228	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	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.50244	--

Manufacturer Test CommentsPostal Delivery AWD; Evap HS+2-day; test number Roush 02003153/02003154

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	0.5024	0	0.502	0.6	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.5024	0	0.502	0.6	Pass

Test Group	TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF
Test #	SOSH10085362	Test Procedure	32 - Federal Fuel Running Loss
Exhaust Test # for this Evap Test	SOSH10085359	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/21/2024	Fuel	Gasoline
Fuel Batch ID	B2Evap	Fuel Calibration Number	525
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	Roush Lab B2		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	4192	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	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.00045	--

Manufacturer Test CommentsPostal Delivery AWD; Evap Running Loss; Roush Test ID: Running Loss_3Bag_20240321_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	0	0	0.05	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0	0	0	0.05	Pass

Test Group	TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF
Test #	SOSH10085374	Test Procedure	24 - Federal fuel refueling test (ORVR)
Exhaust Test # for this Evap Test	SOSH10085358	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	03/01/2024	Fuel	Gasoline
Fuel Batch ID	XEM4CX	Fuel Calibration Number	373
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	Ford APTL		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	4200	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
HC (Hydrocarbon for Running Loss and ORVR)	0.0175	--

Manufacturer Test CommentsPostal Delivery AWD; Evap ORVR; Ford APTL VETS/Test ID: 03012024

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	0.018	0.003	0.02	0.2	Pass
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC	0.018	0.003	0.02	0.2	Pass

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Test Group	TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF																																
Test #	SOSH10085363	Test Procedure	65 - Evap Canister Bleed Test																																
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)																																
Test Date	02/02/2024	Fuel	Gasoline																																
Fuel Batch ID	XEM4CX	Fuel Calibration Number	373																																
Vehicle Class	N/A	DF Type	Mfr. Determined																																
Verify Test Lab ID	Ford APTL																																		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)																																		
Test Start Odometer Reading	4200	Odometer Units	M																																
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--																																
State of Charge Delta	--																																		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes																																
Test Results																																			
<table><tr><td>Test Result Name</td><td>Unrounded Test Result</td><td>Verify Calculated FE Equivalent Value (miles per gallon)</td></tr><tr><td>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</td><td>0.00319</td><td>--</td></tr></table>				Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.00319	--																										
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)																																	
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.00319	--																																	
Manufacturer Test Comments Postal Delivery AWD; Evap Bleed; Ford APTL VETS/Test ID: 5701902																																			
<table><tr><td>Certification Region</td><td>Useful Life</td><td>Standard Level</td><td>Emission Name</td><td>Rounded Result</td><td>Add DF</td><td>Certification Level</td><td>Standard</td><td>Pass/Fail</td></tr><tr><td>Fed</td><td>150,000 miles</td><td>Federal Tier 3 Evap</td><td>HC-TOTAL-EQUIV</td><td>0.0032</td><td>0</td><td>0.003</td><td>0.03</td><td>Pass</td></tr><tr><td>CA</td><td>150,000 miles</td><td>California LEV-III Zero Evap (Option 2)</td><td>HC-TOTAL-EQUIV</td><td>0.0032</td><td>0</td><td>0.003</td><td>0.03</td><td>Pass</td></tr></table>									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	0.0032	0	0.003	0.03	Pass	CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.0032	0	0.003	0.03	Pass
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	0.0032	0	0.003	0.03	Pass																											
CA	150,000 miles	California LEV-III Zero Evap (Option 2)	HC-TOTAL-EQUIV	0.0032	0	0.003	0.03	Pass																											

Certification Summary Information Report

Test Group	TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF					
Emission Data Vehicle Information								
Vehicle ID / Configuration	DIA-77 / 0	Manufacturer Vehicle Configuration Number	1					
Original Test Group Name	SOSHD02.0NGF	Original Evaporative/Refueling Family	SOSHR0200NGF					
Original Test Vehicle Model Year	2025							
Vehicle Model								
Represented Test Vehicle Make	Oshkosh	Represented Test Vehicle Model	Postal Delivery AWD					
Leak Family Details								
Leak Family Identifier	--	Leak Family Name	--					
Drive Sources and Fuel System Details								
	<table border="1"> <thead> <tr> <th>Drive Source and Fuel#</th> <th>Drive Source</th> <th>Fuel</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Combustion Engine</td> <td>Gasoline</td> </tr> </tbody> </table>	Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	Gasoline	
Drive Source and Fuel#	Drive Source	Fuel						
1	Combustion Engine	Gasoline						
Hybrid Indicator	No							
Multiple Fuel Storage	--	Multiple Fuel Combustion	--					
Fuel Cell Indicator	--	Rechargeable Energy Storage System Indicator	--					
Rechargeable Energy Storage System	--	Rechargeable Energy Storage System, if 'Other'	--					
Off-board charge Capable Indicator	--							
Odometer Correction -- Initial	0	Odometer Correction Factor	1					
Odometer Correction Sign	+ = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles							
Odometer Correction Units	Miles							
Engine Code	G25B203P150R05	Rated Horsepower	232					
Displacement (liters)	2							
Air Aspiration Method	Turbocharged	Air Aspiration Method, if 'Other'						
Number of Air Aspiration Devices	1	Air Aspiration Device Configuration	Single					
Charge Air Cooler Type	Air	Drive Mode While Testing	All Wheel Drive					
Shift Indicator Light Usage	Not equipped	Aged Emission Components	150,000 (mi)					
Curb Weight (lbs)	5860	Equivalent Test Weight (pounds)	7500					
GVWR (lbs)	8700	N/V Ratio	29.3					
Axle Ratio	3.81							
Transmission Type	Automatic	# of Transmission Gears	8					
Transmission Lockup	Yes	Creep Gear	No					

Certification Summary Information Report

Test Group		TOSHD02.0NGF			Evaporative/Refueling Family		TOSHR0200NGF	
Dynamometer Coefficients:								
Target Coefficients				Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients	
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)		
City/Highway/Evap	47.24	0.9141	0.061303	-15.29	0.68007	0.059727	32.8	
Cold CO	47.24	0.9141	0.061303	-15.29	0.68007	0.059727	N/A	
US06	47.24	0.9141	0.061303	-15.29	0.68007	0.059727	N/A	
Emission Control Device Comments		TWC/WR-HO2S/HO2S/TC/CAC/EGR/EGRC/DFI/SFI						
Manufacturer Test Vehicle Comments		Test vehicle, exhaust						

Certification Summary Information Report

Test Group	TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF
Test #	SOSH10084122	Test Procedure	52 - Fed. fuel 50 F exh.
Exhaust Test # for this Evap Test	--	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	12/15/2023	Fuel	Gasoline
Fuel Batch ID	T3Reg	Fuel Calibration Number	488
Vehicle Class	MDV6 (Cal. LEV 2/3 MDV GVW 8501-10000)	DF Type	Mfr. Determined
Verify Test Lab ID	Roush Lab B2		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4397	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	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	635.942	--
FE BAG 1 (Bag 1 Fuel Economy)	13.627	13.627
CO2 BAG 2 (Bag 2 Carbon Dioxide)	519.575	--
FE BAG 2 (Bag 2 Fuel Economy)	16.749	16.749
CO2 BAG 3 (Bag 3 Carbon Dioxide)	564.865	--
FE BAG 3 (Bag 3 Fuel Economy)	15.376	15.376
CO (Carbon Monoxide)	0.512059	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-2.557	--
DT-EER (Drive Trace Energy Economy Rating)	-2.4743	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-3.6769	--
HCHO (Formaldehyde)	0.000151	--
MFR FE (Manufacturer Fuel Economy)	15.624	15.624
NOX (Nitrogen Oxide)	0.0056307	--
HC-NM (Non-methane Hydrocarbon)	0.0151	--
NMOG (Non-methane organic gases)	0.016585	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	556.13074	--

Manufacturer Test Comments

Postal Delivery AWD, FTP @ 50F, E10 fuel; Roush test number: FTP75_20231215_01; correction: add HCHO

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Certification Summary Information Report

Test Group	TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF
Test #	SOSH91005766	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	02/13/2024	Fuel	Gasoline
Fuel Batch ID	28637	Fuel Calibration Number	1
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3 MDV GVW 8501-10000)	DF Type	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	4825	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	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	604.3052979	--
FE BAG 1 (Bag 1 Fuel Economy)	999	--
CO2 BAG 2 (Bag 2 Carbon Dioxide)	510.5707703	--
FE BAG 2 (Bag 2 Fuel Economy)	999	--
CO2 BAG 3 (Bag 3 Carbon Dioxide)	578.0698242	--
FE BAG 3 (Bag 3 Fuel Economy)	999	--
METHANE (CH4 - Methane)	0.0207186	--
CO (Carbon Monoxide)	1.2421747	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.6921554	--
DT-EER (Drive Trace Energy Economy Rating)	-0.8982803	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-0.9302948	--
MFR FE (Manufacturer Fuel Economy)	999	--
NOX (Nitrogen Oxide)	0.0323185	--
N2O (Nitrous Oxide)	0.0066981	--
HC-NM (Non-methane Hydrocarbon)	0.0439578	--
NMOG (Non-methane organic gases)	0.0482814	--
PM (Particulate Matter)	0.0012259	--
HC-TOTAL (Total Hydrocarbon)	0.0643863	--

Certification Summary Information Report

Test Group	TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF						
	<table><tr><td>Test Result Name</td><td>Unrounded Test Result</td><td>Verify Calculated CREE/OPT-CREE</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>9999.9999999</td><td>999</td></tr></table>	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 CREE/OPT-CREE							
Carbon-Related Exhaust Emissions	9999.9999999	999							
	<table><tr><td>Test Result Name</td><td>Unrounded Test Result</td><td>Verify Calculated CO2</td></tr><tr><td>Carbon dioxide</td><td>548.4747925</td><td>--</td></tr></table>	Test Result Name	Unrounded Test Result	Verify Calculated CO2	Carbon dioxide	548.4747925	--		
Test Result Name	Unrounded Test Result	Verify Calculated CO2							
Carbon dioxide	548.4747925	--							
Manufacturer Test Comments	None	Unrounded Result for the following test results were modified by Verify: FE BAG 1, FE BAG 2, MFR FE, FE BAG 3							

Certification Summary Information Report

Test Group		TOSHD02.0NGF			Evaporative/Refueling Family					TOSHR0200NGF		
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	1.24	--	--	--	--	--	1.2	4.2	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	CO-COMP	4.56	--	--	--	--	--	4.6	12.0	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	CO2	999	--	--	--	0	--	999	--	--
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG	0.0483	--	--	--	--	--	0.048	999.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG+NOX	0.0806	--	--	--	--	--	0.081	0.170	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG+NOX-COMP	0.1398	--	--	--	--	--	0.14	0.450	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NOX	0.0323	--	--	--	--	--	0.032	999.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	PM	0.0012	--	--	--	--	--	0.001	0.008	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	PM-COMP	0.0017	--	--	--	--	--	0.002	0.010	Pass
CA	150,000 miles	California LEV-III SULEV170	CO	1.24	--	--	--	--	--	1.2	4.2	Pass
CA	150,000 miles	California LEV-III SULEV170	CO-COMP	4.56	--	--	--	--	--	4.6	12.0	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG	0.0483	--	--	--	--	--	0.048	999.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG+NOX	0.0806	--	--	--	--	--	0.081	0.170	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG+NOX-COMP	0.1398	--	--	--	--	--	0.14	0.450	Pass
CA	150,000 miles	California LEV-III SULEV170	NOX	0.0323	--	--	--	--	--	0.032	999.999	Pass
CA	150,000 miles	California LEV-III SULEV170	PM	0.0012	--	--	--	--	--	0.001	0.008	Pass
CA	150,000 miles	California LEV-III SULEV170	PM-COMP	0.0017	--	--	--	--	--	0.002	0.008	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CO2 Emission name is a Verify-calculated value.

Certification Summary Information Report

Test Group	TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF																																																						
Test #	SOSH91005864	Test Procedure	21 - Federal fuel 2-day exhaust (w/can load)																																																						
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline																																																						
Test Date	04/11/2024	Fuel	Gasoline																																																						
Fuel Batch ID	29351	Fuel Calibration Number	1																																																						
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3 MDV GVW 8501-10000)	DF Type	Mfr. Determined																																																						
Verify Test Lab ID	--																																																								
E10 Evaporative Test Measurement Method	--																																																								
Test Start Odometer Reading	5054	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	Yes																																																						
Test Results																																																									
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Certification Summary Information Report

Test Group		TOSHD02.0NGF			Evaporative/Refueling Family				TOSHR0200NGF			
		Test Result Name		Unrounded Test Result		Verify Calculated CO2						
		Carbon dioxide		551.9849854		--						
Manufacturer Test Comments		None										
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	1.85	--	--	--	--	--	1.8	4.2	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	CO2	555	--	--	--	0	--	555	--	--
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG	0.0537	--	--	--	--	--	0.054	999.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG+NOX	0.0972	--	--	--	--	--	0.097	0.170	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NOX	0.0435	--	--	--	--	--	0.044	999.999	Pass
CA	150,000 miles	California LEV-III SULEV170	CO	1.85	--	--	--	--	--	1.8	4.2	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG	0.0537	--	--	--	--	--	0.054	999.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG+NOX	0.0972	--	--	--	--	--	0.097	0.170	Pass
CA	150,000 miles	California LEV-III SULEV170	NOX	0.0435	--	--	--	--	--	0.044	999.999	Pass
NOTE: For Non-charge depleting tests, the Rounded Result for CO2 Emission name is a Verify-calculated value.												

Certification Summary Information Report

Test Group	TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF																																				
Test #	SOSH91005770	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	02/13/2024	Fuel	Gasoline																																				
Fuel Batch ID	28637	Fuel Calibration Number	1																																				
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3 MDV GVW 8501-10000)	DF Type	Mfr. Determined																																				
Verify Test Lab ID	--																																						
E10 Evaporative Test Measurement Method	--																																						
Test Start Odometer Reading	4836	Odometer Units	M																																				
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Manufacturer Test Comments	None																																						

Certification Summary Information Report

Test Group		TOSHD02.0NGF			Evaporative/Refueling Family					TOSHR0200NGF		
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	CO2	999	--	--	--	0	--	999	--	--
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG	0.0131	--	--	--	--	--	0.013	999.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG+NOX	0.0444	--	--	--	--	--	0.044	0.170	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NOX	0.0313	--	--	--	--	--	0.031	999.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG	0.0131	--	--	--	--	--	0.013	999.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG+NOX	0.0444	--	--	--	--	--	0.044	0.170	Pass
CA	150,000 miles	California LEV-III SULEV170	NOX	0.0313	--	--	--	--	--	0.031	999.999	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CO2 Emission name is a Verify-calculated value.

Certification Summary Information Report

Test Group	TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF																																				
Test #	SOSH91005863	Test Procedure	3 - HWFE																																				
Exhaust Test # for this Evap Test	--	Test Fuel Type	61 - Tier 2 Cert Gasoline																																				
Test Date	04/11/2024	Fuel	Gasoline																																				
Fuel Batch ID	29351	Fuel Calibration Number	1																																				
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3 MDV GVW 8501-10000)	DF Type	Mfr. Determined																																				
Verify Test Lab ID	--																																						
E10 Evaporative Test Measurement Method	--																																						
Test Start Odometer Reading	5065	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	Yes																																				
Test Results																																							
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Manufacturer Test Comments	None																																						

Certification Summary Information Report

Test Group		TOSHD02.0NGF			Evaporative/Refueling Family					TOSHR0200NGF		
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	CO2	443	--	--	--	0	--	443	--	--
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG	0.0252	--	--	--	--	--	0.025	999.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG+NOX	0.1119	--	--	--	--	--	0.112	0.170	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NOX	0.0867	--	--	--	--	--	0.087	999.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG	0.0252	--	--	--	--	--	0.025	999.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG+NOX	0.1119	--	--	--	--	--	0.112	0.170	Pass
CA	150,000 miles	California LEV-III SULEV170	NOX	0.0867	--	--	--	--	--	0.087	999.999	Pass

NOTE: For Non-charge depleting tests, the Rounded Result for CO2 Emission name is a Verify-calculated value.

Certification Summary Information Report

Test Group	TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF																																							
Test #	SOSH91005840	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	03/28/2024	Fuel	Gasoline																																							
Fuel Batch ID	28637	Fuel Calibration Number	1																																							
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3 MDV GVW 8501-10000)	DF Type	Mfr. Determined																																							
Verify Test Lab ID	--																																									
E10 Evaporative Test Measurement Method	--																																									
Test Start Odometer Reading	5023	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	Yes																																							
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Manufacturer Test Comments	None Unrounded Result for the following test results were modified by Verify: MFR FE																																									

Certification Summary Information Report

Test Group		TOSHD02.0NGF				Evaporative/Refueling Family				TOSHR0200NGF		
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	12.58	--	--	--	--	--	12.6	999.9	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG	0.0985	--	--	--	--	--	0.098	999.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NOX	0.173	--	--	--	--	--	0.173	999.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	PM	0.0027	--	--	--	--	--	0.003	999.999	Pass
CA	150,000 miles	California LEV-III SULEV170	CO	12.58	--	--	--	--	--	12.6	999.9	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG	0.0985	--	--	--	--	--	0.098	999.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NOX	0.173	--	--	--	--	--	0.173	999.999	Pass
CA	150,000 miles	California LEV-III SULEV170	PM	0.0027	--	--	--	--	--	0.003	999.999	Pass

Certification Summary Information Report

Test Group	TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF																																	
Test #	SOSH10089080	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	12/13/2024	Fuel	Gasoline																																	
Fuel Batch ID	FEV01	Fuel Calibration Number	1873																																	
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3 MDV GVW 8501-10000)	DF Type	Mfr. Determined																																	
Verify Test Lab ID	FEV VDC Michigan																																			
E10 Evaporative Test Measurement Method	--																																			
Test Start Odometer Reading	5291	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	Yes																																	
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Manufacturer Test Comments	NGDV Postal Delivery AWD; E10 fuel; SC03 (re-test); FEV Vehicle Development Center; test number: 20241213_10_Oshkosh EP-007417																																			

Certification Summary Information Report

Test Group		TOSHD02.0NGF			Evaporative/Refueling Family					TOSHR0200NGF		
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	1.64	--	--	--	--	--	1.6	999.9	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NMOG	0.0421	--	--	--	--	--	0.042	999.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	NOX	0.0541	--	--	--	--	--	0.054	999.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 170	PM	0.0014	--	--	--	--	--	0.001	999.999	Pass
CA	150,000 miles	California LEV-III SULEV170	CO	1.64	--	--	--	--	--	1.6	4.2	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG	0.0421	--	--	--	--	--	0.042	999.999	Pass
CA	150,000 miles	California LEV-III SULEV170	NMOG+NOX	0.0962	--	--	--	--	--	0.096	0.170	Pass
CA	150,000 miles	California LEV-III SULEV170	NOX	0.0541	--	--	--	--	--	0.054	999.999	Pass
CA	150,000 miles	California LEV-III SULEV170	PM	0.0014	--	--	--	--	--	0.001	999.999	Pass

Certification Summary Information Report

Test Group	TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF
Fuel Properties			
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	29351	Fuel Calibration Number	1
Test Fuel Type	61 - Tier 2 Cert Gasoline	Fuel Batch Calibration Date	05/03/2023
Fuel Batch Calibration Effective Date	05/03/2023	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	0.742
Fuel Ethanol Volume Percent (%)	--	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	18439
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.867	Weight Fraction CO2	--
Fuel Batch ID	B2Evap	Fuel Calibration Number	525
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	11/16/2023
Fuel Batch Calibration Effective Date	11/16/2023	Fuel Batch Calibration Ineffective Date	11/15/2027
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	0.828
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.752
Fuel Ethanol Volume Percent (%)	9.7	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17909
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	--	Weight Fraction CO2	--
Fuel Batch ID	T3Reg	Fuel Calibration Number	488
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	07/19/2023
Fuel Batch Calibration Effective Date	07/19/2023	Fuel Batch Calibration Ineffective Date	07/18/2027

Certification Summary Information Report

Test Group	TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	0.828
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.748
Fuel Ethanol Volume Percent (%)	10	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17869
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	--	Weight Fraction CO2	--
Fuel Batch ID	XEM4CX	Fuel Calibration Number	373
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	07/19/2023
Fuel Batch Calibration Effective Date	07/19/2023	Fuel Batch Calibration Ineffective Date	07/18/2027
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	0.829
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.752
Fuel Ethanol Volume Percent (%)	10	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17862
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	--	Weight Fraction CO2	--
Fuel Batch ID	FEV01	Fuel Calibration Number	1873
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	09/24/2024
Fuel Batch Calibration Effective Date	09/24/2024	Fuel Batch Calibration Ineffective Date	09/24/2026
Carbon Weight Fraction NMHC	--	Carbon Weight Fraction HC	0.83
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.75
Fuel Ethanol Volume Percent (%)	9.9	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17709
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	--	Weight Fraction CO2	--

Certification Summary Information Report

Test Group		TOSHD02.0NGF			Evaporative/Refueling Family			TOSHR0200NGF		
Consolidated List of Standards										
Exhaust Standards										
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert		
Vehicle Class		MDV6 (Cal. LEV 2/3 MDV GVW 8501-10000)			Standard Level			California LEV-III SULEV170		
Fuel		Gasoline			Test Procedure			SC03		
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	--	--	--	--	--	--	--	4.2	
150,000 miles	NMOG	--	--	--	--	--	--	--	999.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.170	
150,000 miles	NOX	--	--	--	--	--	--	--	999.999	
150,000 miles	PM	--	--	--	--	--	--	--	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		Gasoline			Test Procedure			US06		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
150,000 miles	CO	--	--	--	--	--	--	--	999.9	
150,000 miles	NMOG	--	--	--	--	--	--	--	999.999	
150,000 miles	NOX	--	--	--	--	--	--	--	999.999	
150,000 miles	PM	--	--	--	--	--	--	--	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		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	CO2	--	--	--	--	--	--	0	999	
150,000 miles	NMOG	--	--	--	--	--	--	--	999.999	
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.170	
150,000 miles	NOX	--	--	--	--	--	--	--	999.999	

Certification Summary Information Report

Test Group		TOSHD02.0NGF			Evaporative/Refueling Family			TOSHR0200NGF	
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert	
Vehicle Class		MDV6 (Cal. LEV 2/3 MDV GVW 8501-10000)			Standard Level			California LEV-III SULEV170	
Fuel		Gasoline			Test Procedure			Fed. fuel 50 F exh.	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
4,000 miles	CO	--	--	--	--	--	--	--	4.2
4,000 miles	HCHO	--	--	--	--	--	--	--	0.016
4,000 miles	NMOG	--	--	1.1	--	--	--	--	999.999
4,000 miles	NMOG+NOX	--	--	1.1	--	--	1	--	0.340
4,000 miles	NOX	--	--	--	--	--	--	--	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		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	--	--	--	--	--	--	--	4.2
150,000 miles	CO-COMP	--	--	--	--	--	--	--	12.0
150,000 miles	CO2	--	--	--	--	--	--	0	999
150,000 miles	HCHO	--	--	--	--	--	--	--	0.006
150,000 miles	METHANE-COMB	--	--	--	--	--	--	--	0.05
150,000 miles	N2O-COMB	--	--	--	--	--	--	--	0.05
150,000 miles	NMOG	--	--	--	--	--	--	--	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.170
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	--	0.450
150,000 miles	NOX	--	--	--	--	--	--	--	999.999
150,000 miles	PM	--	--	--	--	--	--	--	0.008
150,000 miles	PM-COMP	--	--	--	--	--	--	--	0.010

Certification Summary Information Report

Test Group	TOSHD02.0NGF				Evaporative/Refueling Family			TOSHR0200NGF		
Cert Region	California + CAA Section 177 states				Cert/In-Use Code			Cert		
Vehicle Class	MDV6 (Cal. LEV 2/3 MDV GVW 8501-10000)				Standard Level			California LEV-III SULEV170		
Fuel	Gasoline				Test Procedure			US06		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
150,000 miles	CO	--	--	--	--	--	--	--	999.9	
150,000 miles	NMOG	--	--	--	--	--	--	--	999.999	
150,000 miles	NOX	--	--	--	--	--	--	--	999.999	
150,000 miles	PM	--	--	--	--	--	--	--	999.999	

Cert Region	California + CAA Section 177 states				Cert/In-Use Code		Cert		
Vehicle Class	MDV6 (Cal. LEV 2/3 MDV GVW 8501-10000)				Standard Level		California LEV-III SULEV170		
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	--	--	--	--	--	--	--	4.2
150,000 miles	CO-COMP	--	--	--	--	--	--	--	12.0
150,000 miles	HCHO	--	--	--	--	--	--	--	0.006
150,000 miles	METHANE-COMB	--	--	--	--	--	--	--	0.05
150,000 miles	N2O-COMB	--	--	--	--	--	--	--	0.05
150,000 miles	NMOG	--	--	--	--	--	--	--	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.170
150,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	--	0.450
150,000 miles	NOX	--	--	--	--	--	--	--	999.999
150,000 miles	PM	--	--	--	--	--	--	--	0.008
150,000 miles	PM-COMP	--	--	--	--	--	--	--	0.008

Certification Summary Information Report

Test Group		TOSHD02.0NGF			Evaporative/Refueling Family			TOSHR0200NGF	
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert	
Vehicle Class		MDV6 (Cal. LEV 2/3 MDV GVW 8501-10000)			Standard Level			California LEV-III SULEV170	
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	--	--	--	--	--	--	--	999.999
150,000 miles	NMOG+NOX	--	--	--	--	--	1	--	0.170
150,000 miles	NOX	--	--	--	--	--	--	--	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		Gasoline			Test Procedure			SC03	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	CO	--	--	--	--	--	--	--	999.9
150,000 miles	NMOG	--	--	--	--	--	--	--	999.999
150,000 miles	NOX	--	--	--	--	--	--	--	999.999
150,000 miles	PM	--	--	--	--	--	--	--	999.999

Evaporative/Refueling Standards

Evaporative/Refueling Family		TOSHR0200NGF		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	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.600	0		

Evaporative/Refueling Family		TOSHR0200NGF		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		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	HC-TOTAL-EQUIV	--	0.05	0		

Certification Summary Information Report

Test Group		TOSHD02.0NGF		Evaporative/Refueling Family		TOSHR0200NGF	
Evaporative/Refueling Family		TOSHR0200NGF		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		Standard Level		California LEV-III Zero Evap (Option 2)	
Test Procedure		Evap Canister Bleed Test					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.030	0		
Evaporative/Refueling Family		TOSHR0200NGF		Cert Region		Federal	
Cert/In-Use Code		Cert		Standard Level		Federal Tier 3 Evap	
Test Procedure		Evap Canister Bleed Test					
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.030	0		
Evaporative/Refueling Family		TOSHR0200NGF		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		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	HC-TOTAL-EQUIV	--	0.600	0		
Evaporative/Refueling Family		TOSHR0200NGF		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	Std	Add DF		
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.600	0		
Evaporative/Refueling Family		TOSHR0200NGF		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		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	HC-TOTAL-EQUIV	--	0.600	0		

Certification Summary Information Report

Test Group		TOSHD02.0NGF		Evaporative/Refueling Family		TOSHR0200NGF	
Evaporative/Refueling Family		TOSHR0200NGF		Cert Region		Federal	
Cert/In-Use Code		Cert		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	--	0.20	0.003		
Evaporative/Refueling Family		TOSHR0200NGF		Cert Region		California + CAA Section 177 states	
Cert/In-Use Code		Cert		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	HC	--	0.20	0.003		
Evaporative/Refueling Family		TOSHR0200NGF		Cert Region		Federal	
Cert/In-Use Code		Cert		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		

Certification Summary Information Report

Test Group		TOSHD02.0NGF	Evaporative/Refueling Family	TOSHR0200NGF
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		TOSHD02.0NGF	Evaporative/Refueling Family		TOSHR0200NGF
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		TOSHD02.0NGF	Evaporative/Refueling Family		TOSHR0200NGF
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		