

Certification Summary Information Report

Manufacturer	FCA US LLC	Manufacturer Code	CRX
Test Group	VCRXD06.4573	Evaporative/Refueling Family	VCRXF0213TR0
Certificate Number	VCRXD06.4573-011	CARB Executive Order #	--
Certificate Issue Date	04/01/2026	Certificate Revision Date	--
Certificate Effective Date	04/01/2026	Conditional Certificate	No
CSI Revision #	--	CSI Submission/Revision Date	03/19/2026 04:14:07 PM
Model Year	2027		

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	Multipoint/sequential fuel injection	No

Hybrid Indicator	No		
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	--
Multiple Fuel Combustion	--	Off-board Charge Capable Indicator	--
Fuel Cell Indicator	--	EPA Vehicle Class	HDV1
Federal Clean Fuel Vehicle	Yes	Federal Clean Fuel Vehicle Standard	LEV
Federal Clean Fuel Vehicle ILEV	No	California Partial Zero Emissions Vehicle Indicator	No
Durability Group Name	VCRXGPGNNF38	Durability Group Equivalency Factor	1.6
Reduced Fee Test Group	No	Certification Region Code(s)	FA, CA
Complies with HD GHG 2b/3 regulations?	Yes		
Introduction into Commerce Date	06/29/2026	CAP2000 Conditional Certificate?	No
Independent Commercial Importer?	No	Alternative Fuel Converter Certificate?	No
SFTP Federal Composite Compliance Identifier	Tier 3	SFTP Tier 2 Composite CO Option	No
SFTP LEV-III Composite Compliance Indicator	Yes		
OBD Compliance Type	CARB	OBD Demonstration Vehicle Test Group	VCRXT03.6570
Test Group OBD Compliance Level	Partial - with deficiencies	Number of Test Group OBD Deficiencies	2
OBD Deficiencies Comments	SAE J1979-2 Implementation, Adaptive Cruise Control and Parallel Park SystemsDefault Action		
Mfr Test Group Comments	E10 tests: CH4 Std=0.05; CH4 combined = 0.027(0.55)+0.0152(0,45)=0.022 g/mi; N2O Std=0.05;N2O combined = 0.004(0.55)+0.002(0.45)=0.003 g/mi		
Mfr Exhaust / Evap Standards Comments	--		

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Test Group	VCRXD06.4573	Evaporative/Refueling Family	VCRXF0213TR0				
Evaporative/Refueling Family Information							
Evaporative Summary Information Type	New	Submission/Correction Date	03/18/2026 05:10:22 PM				
Integrated ORVR?	Yes	Fuel(s)	Gasoline				
Multiple Fuel Storage	--						
Bladder Fuel Tank?	No						
Fuel Tank Material	Plastic	Fuel Tank Material Description	hdpe/co-ex				
Fill Pipe Seal Type	Liquid seal						
Air Intake System Vapor Storage Device?	Yes	Air Intake System Vapor Storage Device Description	Panel				
Fuel System Vapor Storage Canister?	Yes	Other Vapor Storage	--				
Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)	219	Number of Primary Canisters	1				
Number of Bleed Canisters	0	Bleed Canister Total Working Capacity (grams)	0				
Mfr Evaporative/Refueling Family Comments	This Evaporative Family is being certified with an evaporative FEL of 0.600 grams						
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				
VCRXF0213TR0-LF1	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
FCA US LLC	12 - RAM	940 - 2500 Cab Chassis 4X2	California + CAA Section 177 states	2-Wheel Drive, Rear	Automatic	8	Yes
FCA US LLC	12 - RAM	945 - 2500 Cab Chassis 4X4	Federal	4-Wheel Drive	Automatic	8	Yes
FCA US LLC	12 - RAM	945 - 2500 Cab Chassis 4X4	California + CAA Section 177 states	4-Wheel Drive	Automatic	8	Yes
FCA US LLC	12 - RAM	940 - 2500 Cab Chassis 4X2	Federal	2-Wheel Drive, Rear	Automatic	8	Yes
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 0W-40				
Number of Cylinders/Rotors	8	Mechanically Variable Compression Ratio Indicator	N				

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Test Group	VCRXD06.4573	Evaporative/Refueling Family	VCRXF0213TR0	
After Treatment Device(s) (ATD)				
ATD Number	ATD Type	ATD Precious Metal	Substrate Material	Substrate Construction
1	Three-way catalyst	Platinum + Palladium + Rhodium	Ceramic	Monolith
2	Three-way catalyst	Platinum + Rhodium	Ceramic	Monolith
3	Three-way catalyst	Rhodium	Ceramic	Monolith
Mfr After Treatment Device (ATD) Comments	THREE-WAY CATALYST			
Direct Ozone Reduction (DOR) Device	Not Equipped			
Mfr Emission Control Device Comments	--			
Engine Configuration Number 1				
Engine Displacement (liters)	6.4	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	0	
Air Aspiration Device Configuration	--	Charge Air Cooler Type	N/A	
Air Aspiration Drive Method(s)	--			
Cylinder Deactivation	Yes			
Cylinder Deactivation Description	Multiple Displacement Solenoid (MDS)			
Variable Valve Timing	Yes			
Variable Valve Timing System Description	Cam phaser			
Variable Valve Lift?	No			
Variable Valve Lift System Description	--			
Number of Knock Sensors	2	Number of Air/Fuel Sensors	4	
Air/Fuel Sensor # 1 Type	Heated oxygen	Air/Fuel Sensor # 1 Description	--	
Air/Fuel Sensor # 2 Type	Heated oxygen	Air/Fuel Sensor # 2 Description	--	
Air/Fuel Sensor # 3 Type	Heated oxygen	Air/Fuel Sensor # 3 Description	--	
Air/Fuel Sensor # 4 Type	Heated oxygen	Air/Fuel Sensor # 4 Description	--	
Mfr Air/Fuel Sensor Comments	--			
Exhaust Gas Recirculation	Yes	Cooled Exhaust Gas Recirculation	Yes	
EGR Type	Electronic/Electric	Exhaust Gas Recirculation Description if 'Other'	--	
Closed Loop Air Injection System	No			
Air Injection Type	Not Applicable	Air Injection Type if 'Other'	--	
Mfr Engine Configuration Comments	--			

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Test Group		VCRXD06.4573			Evaporative/Refueling Family			VCRXF0213TR0		
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	SCRX91006113	SCRX91006114	SCRX10087762	--	SCRX91006110	--	228.2	--	286.1	1
SFTP LEV-III Official Test Numbers										
Test Group Fuel	FTP	US06	SC03							
Gasoline	SCRX91006113	SCRX91006114	SCRX10087762							

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Test Group	VCRXD06.4573	Evaporative/Refueling Family	VCRXF0213TR0
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Emission Data Vehicle Information

Vehicle ID / Configuration	L5DJ25253 / 0	Manufacturer Vehicle Configuration Number	0
Original Test Group Name	SCRXD06.45V1	Original Evaporative/Refueling Family	SCRXR0213TP1
Original Test Vehicle Model Year	2025		

Vehicle Model

Represented Test Vehicle Make	RAM	Represented Test Vehicle Model	2500 4X2
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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	Gasoline

Hybrid Indicator	No	Multiple Fuel Combustion	--
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	--
Fuel Cell Indicator	--	Rechargeable Energy Storage System, if 'Other'	--
Rechargeable Energy Storage System	--		
Off-board charge Capable Indicator	--	Odometer Correction Factor	1
Odometer Correction -- Initial	0	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor	
Odometer Correction Sign	Miles		
Odometer Correction Units	Miles	Rated Horsepower	405
Engine Code	AA-0350	Air Aspiration Method, if 'Other'	
Displacement (liters)	6.4	Air Aspiration Device Configuration	--
Air Aspiration Method	Naturally Aspirated	Drive Mode While Testing	2-Wheel Drive, Rear
Number of Air Aspiration Devices	0	Aged Emission Components	4,000 (mi)
Charge Air Cooler Type	--	Equivalent Test Weight (pounds)	8000
Shift Indicator Light Usage	Not equipped	N/V Ratio	28.8
Curb Weight (lbs)	8000	# of Transmission Gears	8
GVWR (lbs)	10000	Creeper Gear	No
Axle Ratio	4.1		
Transmission Type	Automatic		
Transmission Lockup	Yes		

Dynamometer Coefficients:

Coefficient Category	Target Coefficients			Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	
City/Highway/Evap	66.54	0.1424	0.04151	29.9	0.2878	0.03745	23.7

Emission Control Device Comments --

Certification Summary Information Report

Test Group	VCRXD06.4573	Evaporative/Refueling Family	VCRXF0213TR0
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Manufacturer Test Vehicle Comments Callout: 25EV-D06.45V1-1

Test #	SCRX10087430	Test Procedure	23 - 2-day evap
Exhaust Test # for this Evap Test	SCRX10087427	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	07/20/2024	Fuel	Gasoline
Fuel Batch ID	11327	Fuel Calibration Number	1
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	CTC		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	3570	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.2233656	--

Manufacturer Test Comments Callout: 25EV-D06.45V1-1; Cert 2-Day/Evap (E10) Hot_Soak_HC_(g) = 0.03488, Diurnal (g) = 0.17194; 2-DayTotal = (0.03488+0.17194)*1.08 = 0.2233656 (g)

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	0.2234	0.0057	0.229	0.6	Pass
CA	150,000 miles	Other	HC-TOTAL-EQUIV	0.2234	0.0057	0.229	0.6	Pass

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Test Group	VCRXD06.4573	Evaporative/Refueling Family	VCRXF0213TR0
Test #	SCRX10087433	Test Procedure	34 - Federal fuel 3-day evap
Exhaust Test # for this Evap Test	SCRX10087429	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	08/02/2024	Fuel	Gasoline
Fuel Batch ID	11327	Fuel Calibration Number	1
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	CTC		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	3746	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.283068	--

Manufacturer Test Comments

Callout: 25EV-D06.45V1-1; Cert 3-Day/Evap (E10) Hot_Soak_HC_(g) = 0.06724 , Diurnal (g) = 0.19486; 3DayTotal = (0.06724+0.19486)*1.08 = 0.283068 (g)

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	0.2831	0.009	0.292	0.6	Pass
CA	150,000 miles	Other	HC-TOTAL-EQUIV	0.2831	0.009	0.292	0.6	Pass

Certification Summary Information Report

Test Group	VCRXD06.4573	Evaporative/Refueling Family	VCRXF0213TR0
Test #	SCRX10087432	Test Procedure	32 - Federal Fuel Running Loss
Exhaust Test # for this Evap Test	SCRX10087429	Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)
Test Date	08/02/2024	Fuel	Gasoline
Fuel Batch ID	11327	Fuel Calibration Number	1
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	CTC		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	3729	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	No

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0001404	--

Manufacturer Test Comments

Callout: 25EV-D06.45V1-1; Cert 3-Day/Evap RL test(E10) RL=(0.00013 *1.08)=0.0001404

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	Other	HC-TOTAL-EQUIV	0	0	0	0.05	Pass

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Test Group	VCRXD06.4573	Evaporative/Refueling Family	VCRXF0213TR0
Test #	SCRX10087465	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	06/09/2024	Fuel	Gasoline
Fuel Batch ID	--	Fuel Calibration Number	--
Vehicle Class	N/A	DF Type	Mfr. Determined
Verify Test Lab ID	Phinia		
E10 Evaporative Test Measurement Method	Calculated (1.08 x FID Total Hydrocarbons)		
Test Start Odometer Reading	0	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	--	Road Speed Fan Usage	--

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value
HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)	0.0071	--

Manufacturer Test Comments Test run on a rig with aged components (not actual vehicle)

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	0.0071	0	0.007	0.03	Pass
CA	150,000 miles	Other	HC-TOTAL-EQUIV	0.0071	0	0.007	0.03	Pass

Certification Summary Information Report

Test Group	VCRXD06.4573	Evaporative/Refueling Family	VCRXF0213TR0
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Emission Data Vehicle Information

Vehicle ID / Configuration	L5DJ78144 / 0	Manufacturer Vehicle Configuration Number	0
Original Test Group Name	SCRXD06.45V2	Original Evaporative/Refueling Family	SCRXF0391TP0
Original Test Vehicle Model Year	2025		
Vehicle Model			
Represented Test Vehicle Make	RAM	Represented Test Vehicle Model	2500 Cab Chassis 4X4

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	Gasoline

Hybrid Indicator	No	Multiple Fuel Combustion	--
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	--
Fuel Cell Indicator	--	Rechargeable Energy Storage System, if 'Other'	--
Rechargeable Energy Storage System	--		
Off-board charge Capable Indicator	--		
Odometer Correction -- Initial	0	Odometer Correction Factor	1
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Miles		
Engine Code	AA-0650	Rated Horsepower	405
Displacement (liters)	6.4		
Air Aspiration Method	Naturally Aspirated	Air Aspiration Method, if 'Other'	
Number of Air Aspiration Devices	0	Air Aspiration Device Configuration	--
Charge Air Cooler Type	--	Drive Mode While Testing	2-Wheel Drive, Rear
Shift Indicator Light Usage	Not equipped	Aged Emission Components	150,000 (mi)
Curb Weight (lbs)	8992	Equivalent Test Weight (pounds)	9000
GVWR (lbs)	10000	N/V Ratio	28.8
Axle Ratio	4.1		
Transmission Type	Automatic	# of Transmission Gears	8
Transmission Lockup	Yes	Creeper Gear	No

Dynamometer Coefficients:

Coefficient Category	Target Coefficients			Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	
City/Highway/Evap	58.69	1.0769	0.0699	-2.09	1.3569	0.06268	38.3
US06	58.69	1.0769	0.0699	-2.09	1.3569	0.06268	N/A

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Test Group	VCRXD06.4573	Evaporative/Refueling Family	VCRXF0213TR0
Emission Control Device Comments	--		
Manufacturer Test Vehicle Comments	callout: 25DA-D06.45V2-1		

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Test Group	VCRXD06.4573	Evaporative/Refueling Family	VCRXF0213TR0
Test #	SCRX91006113	Test Procedure	25 - California fuel 2-day exhaust (w/can load)
Exhaust Test # for this Evap Test	--	Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline
Test Date	11/05/2024	Fuel	Gasoline
Fuel Batch ID	41630	Fuel Calibration Number	1
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	DF Type	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	5094	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			

Certification Summary Information Report

Test Group	VCRXD06.4573	Evaporative/Refueling Family	VCRXF0213TR0
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Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	885.3612061	--
FE BAG 1 (Bag 1 Fuel Economy)	999	--
CO2 BAG 2 (Bag 2 Carbon Dioxide)	789.7398682	--
FE BAG 2 (Bag 2 Fuel Economy)	999	--
CO2 BAG 3 (Bag 3 Carbon Dioxide)	772.1397705	--
FE BAG 3 (Bag 3 Fuel Economy)	999	--
METHANE (CH4 - Methane)	0.0274712	--
CO (Carbon Monoxide)	0.8167551	--
METHANE-COMB (Combined CH4 for HD 2b/3 vehicles only)	0.0219479	--
N2O-COMB (Combined Nitrous Oxide for HD 2b/3 vehicles only)	0.0030797	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	2.6954169	--
DT-EER (Drive Trace Energy Economy Rating)	2.3742304	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	3.9217079	--
MFR FE (Manufacturer Fuel Economy)	999	--
NOX (Nitrogen Oxide)	0.0356658	--
N2O (Nitrous Oxide)	0.0036769	--
HC-NM (Non-methane Hydrocarbon)	0.0544846	--
NMOG (Non-methane organic gases)	0.0599211	--
PM (Particulate Matter)	0.0006318	--
HC-TOTAL (Total Hydrocarbon)	0.0813337	--

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

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	804.696228	--

Manufacturer Test Comments

Amendment to Report COMP5004005CRX (test number 20250004005, EV-CIS submission SCR91006113); at IACD request, this test submission was modified to add N2O-COMB and METHANE-COMB (values provided by IACD). No other values were changed. EVCIS FTP test number SCR91006113 and Hwy test number SCR91006110 were used to calculate the combined N2O and combined CHR results. Unrounded Result for the following test results were modified by Verify: MFR FE, FE BAG 1, FE BAG 3, FE BAG 2

Certification Summary Information Report

Test Group		VCRXD06.4573			Evaporative/Refueling Family					VCRXF0213TR0		
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 250	CO	0.82	--	--	--	0	1	0.8	6.4	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	CO-COMP	0.94	--	--	--	0	1	0.9	22.0	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	CO2	999	--	--	--	0	1	999	--	--
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	METHANE	0.027	--	--	--	0	1	0.03	999.99	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	METHANE-COMB	0.022	--	--	--	0	1	0.02	0.05	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	N2O	0.004	--	--	--	0	1	0	999.99	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	N2O-COMB	0.003	--	--	--	0	1	0	0.05	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	NMOG	0.0599	--	--	--	0	1	0.06	999.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	NMOG+NOX	0.0956	--	--	--	--	--	0.096	0.250	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	NMOG+NOX-COMP	0.0416	--	--	--	0	1	0.042	0.800	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	NOX	0.0357	--	--	--	0	1	0.036	999.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	PM	0.0006	--	--	--	0	1	0.001	0.008	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	PM-COMP	0.0008	--	--	--	0	1	0.001	0.010	Pass
CA	150,000 miles	Other	CO	0.82	--	--	--	0	1	0.8	6.4	Pass
CA	150,000 miles	Other	CO-COMP	0.94	--	--	--	0	1	0.9	22.0	Pass
CA	150,000 miles	Other	CO2	999	--	--	--	0	1	999	--	--
CA	150,000 miles	Other	METHANE	0.027	--	--	--	0	1	0.03	999.99	Pass
CA	150,000 miles	Other	METHANE-COMB	0.022	--	--	--	0	1	0.02	0.05	Pass
CA	150,000 miles	Other	N2O	0.004	--	--	--	0	1	0	999.99	Pass

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Test Group		VCRXD06.4573			Evaporative/Refueling Family					VCRXF0213TR0		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	RAF	NMOG/NM HC Ratio	Diesel Adjustment Factor	Add DF	Mult DF	Certification Level	Standard	Pass/Fail
CA	150,000 miles	Other	N2O-COMB	0.003	--	--	--	0	1	0	0.05	Pass
CA	150,000 miles	Other	NMOG	0.0599	--	--	--	0	1	0.06	999.999	Pass
CA	150,000 miles	Other	NMOG+NOX	0.0956	--	--	--	--	--	0.096	0.250	Pass
CA	150,000 miles	Other	NMOG+NOX-COMP	0.0416	--	--	--	0	1	0.042	0.800	Pass
CA	150,000 miles	Other	NOX	0.0357	--	--	--	0	1	0.036	999.999	Pass
CA	150,000 miles	Other	PM	0.0006	--	--	--	0	1	0.001	0.008	Pass
CA	150,000 miles	Other	PM-COMP	0.0008	--	--	--	0	1	0.001	0.010	Pass

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

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Test Group	VCRXD06.4573	Evaporative/Refueling Family	VCRXF0213TR0
Test #	SCRX91006110	Test Procedure	3 - HWFE
Exhaust Test # for this Evap Test	--	Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline
Test Date	11/05/2024	Fuel	Gasoline
Fuel Batch ID	41630	Fuel Calibration Number	1
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	DF Type	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	5103	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
Test Results			
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	
METHANE (CH4 - Methane)	0.0151972	--	
CO (Carbon Monoxide)	0.3318196	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	5.0677667	--	
DT-EER (Drive Trace Energy Economy Rating)	0.424844	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	6.2693624	--	
MFR FE (Manufacturer Fuel Economy)	14.595973	--	
NOX (Nitrogen Oxide)	0.003289	--	
N2O (Nitrous Oxide)	0.0023497	--	
HC-NM (Non-methane Hydrocarbon)	0.0065254	--	
NMOG (Non-methane organic gases)	0.0067211	--	
HC-TOTAL (Total Hydrocarbon)	0.0213784	--	
Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE	
Carbon-Related Exhaust Emissions	9999.9999999	999	
Test Result Name	Unrounded Test Result	Verify Calculated CO2	
Carbon dioxide	593.6035767	--	
Manufacturer Test Comments	None		

Certification Summary Information Report

Test Group		VCRXD06.4573			Evaporative/Refueling Family					VCRXF0213TR0		
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 250	CO2	999	--	--	--	0	1	999	--	--
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	METHANE	0.015	--	--	--	0	1	0.02	999.99	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	N2O	0.002	--	--	--	0	1	0	999.99	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	NMOG	0.0067	--	--	--	0	1	0.007	999.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	NMOG+NOX	0.01	--	--	--	--	--	0.01	0.250	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	NOX	0.0033	--	--	--	0	1	0.003	999.999	Pass
CA	150,000 miles	Other	CO2	999	--	--	--	0	1	999	--	--
CA	150,000 miles	Other	METHANE	0.015	--	--	--	0	1	0.02	999.99	Pass
CA	150,000 miles	Other	N2O	0.002	--	--	--	0	1	0	999.99	Pass
CA	150,000 miles	Other	NMOG	0.0067	--	--	--	0	1	0.007	999.999	Pass
CA	150,000 miles	Other	NMOG+NOX	0.01	--	--	--	--	--	0.01	0.250	Pass
CA	150,000 miles	Other	NOX	0.0033	--	--	--	0	1	0.003	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	VCRXD06.4573	Evaporative/Refueling Family	VCRXF0213TR0
Test #	SCRX91006114	Test Procedure	90 - US06
Exhaust Test # for this Evap Test	--	Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline
Test Date	11/05/2024	Fuel	Gasoline
Fuel Batch ID	41630	Fuel Calibration Number	1
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	DF Type	Mfr. Determined
Verify Test Lab ID	--		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	5121	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	--		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes

Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	1287.4559326	--
FE BAG 1 (Bag 1 Fuel Economy)	999	--
CO2 BAG 2 (Bag 2 Carbon Dioxide)	796.6958618	--
FE BAG 2 (Bag 2 Fuel Economy)	999	--
METHANE (CH4 - Methane)	0.0187065	--
CO (Carbon Monoxide)	1.3460367	--
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.419692	--
DT-EER (Drive Trace Energy Economy Rating)	-0.7417969	--
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	-1.6845996	--
MFR FE (Manufacturer Fuel Economy)	999	--
NOX (Nitrogen Oxide)	0.0108801	--
N2O (Nitrous Oxide)	0.0027827	--
HC-NM (Non-methane Hydrocarbon)	0.0068256	--
NMOG (Non-methane organic gases)	0.0070304	--
PM (Particulate Matter)	0.0009522	--
HC-TOTAL (Total Hydrocarbon)	0.0251084	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	906.0286255	--

Manufacturer Test Comments

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

Certification Summary Information Report

Test Group		VCRXD06.4573			Evaporative/Refueling Family					VCRXF0213TR0		
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 250	CO	1.35	--	--	--	0	1	1.4	999.9	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	NMOG	0.007	--	--	--	0	1	0.007	999.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	NMOG+NOX	0.0179	--	--	--	--	--	0.018	999.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	NOX	0.0109	--	--	--	0	1	0.011	999.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	PM	0.001	--	--	--	0	1	0.001	999.999	Pass
CA	150,000 miles	Other	CO	1.35	--	--	--	0	1	1.4	999.9	Pass
CA	150,000 miles	Other	NMOG	0.007	--	--	--	0	1	0.007	999.999	Pass
CA	150,000 miles	Other	NMOG+NOX	0.0179	--	--	--	--	--	0.018	999.999	Pass
CA	150,000 miles	Other	NOX	0.0109	--	--	--	0	1	0.011	999.999	Pass
CA	150,000 miles	Other	PM	0.001	--	--	--	0	1	0.001	999.999	Pass

Certification Summary Information Report

Test Group	VCRXD06.4573	Evaporative/Refueling Family	VCRXF0213TR0
Test #	SCRX10087762	Test Procedure	95 - SC03
Exhaust Test # for this Evap Test	--	Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline
Test Date	09/14/2024	Fuel	Gasoline
Fuel Batch ID	11350	Fuel Calibration Number	1
Vehicle Class	HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	DF Type	Mfr. Determined
Verify Test Lab ID	CPG		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	5030	Odometer Units	M
4WD Test Dyno	No	Diesel Adjustment Factor Usage	--
State of Charge Delta	No		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
Test Results			
Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)	
METHANE (CH4 - Methane)	0.025386	--	
CO (Carbon Monoxide)	0.752334	--	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	-0.131	--	
DT-EER (Drive Trace Energy Economy Rating)	-0.11	--	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.1525	--	
MFR FE (Manufacturer Fuel Economy)	9.5	9.5	
NOX (Nitrogen Oxide)	0.003747	--	
HC-NM (Non-methane Hydrocarbon)	0.004523	--	
NMOG (Non-methane organic gases)	0.004659	--	
PM (Particulate Matter)	0.0008	--	
HC-TOTAL (Total Hydrocarbon)	0.029114	--	
Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE	
Carbon-Related Exhaust Emissions	919	--	
Test Result Name	Unrounded Test Result	Verify Calculated CO2	
Carbon dioxide	918.21968	--	
Manufacturer Test Comments	25DA-D06.45V2-1 sc03 @ALVW 150k Auto Fixed cE10		

Certification Summary Information Report

Test Group		VCRXD06.4573			Evaporative/Refueling Family					VCRXF0213TR0		
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 250	CO	0.75	--	--	--	0	1	0.8	999.9	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	NMOG	0.0047	--	--	--	0	1	0.005	999.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	NMOG+NOX	0.0084	--	--	--	--	--	0.008	999.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	NOX	0.0037	--	--	--	0	1	0.004	999.999	Pass
Fed	150,000 miles	Federal Tier 3 HD Class 2b Bin 250	PM	0.0008	--	--	--	0	1	0.001	999.999	Pass
CA	150,000 miles	Other	CO	0.7523	--	--	--	0	1	0.752	999.999	Pass
CA	150,000 miles	Other	NMOG	0.0047	--	--	--	0	1	0.005	999.999	Pass
CA	150,000 miles	Other	NMOG+NOX	0.0084	--	--	--	--	--	0.008	999.999	Pass
CA	150,000 miles	Other	NOX	0.0037	--	--	--	0	1	0.004	999.999	Pass
CA	150,000 miles	Other	PM	0.0008	--	--	--	0	1	0.001	999.999	Pass

Certification Summary Information Report

Test Group	VCRXD06.4573	Evaporative/Refueling Family	VCRXF0213TR0
Fuel Properties			
Fuel Batch ID	11350	Fuel Calibration Number	1
Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline	Fuel Batch Calibration Date	08/26/2024
Fuel Batch Calibration Effective Date	08/26/2024	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	0.828	Carbon Weight Fraction HC	--
Exhaust Carbon Weight Fraction	--	Fuel Methanol Volume Fraction	--
Fuel Density (grams/cubic ft)	--	Fuel Specific Gravity	0.752
Fuel Ethanol Volume Percent (%)	9.6	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17966
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.828	Weight Fraction CO2	--
Fuel Batch ID	11327	Fuel Calibration Number	1
Test Fuel Type	48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)	Fuel Batch Calibration Date	06/08/2024
Fuel Batch Calibration Effective Date	06/08/2024	Fuel Batch Calibration Ineffective Date	--
Carbon Weight Fraction NMHC	0.828	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 (%)	9.7	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17997
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.828	Weight Fraction CO2	--
Fuel Batch ID	41630	Fuel Calibration Number	1
Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline	Fuel Batch Calibration Date	04/24/2024
Fuel Batch Calibration Effective Date	04/24/2024	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	0.749
Fuel Ethanol Volume Percent (%)	9.8	Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)	17910
Fuel Net Heat of Combustion (E10) (MJ/kg)	--	Fuel Carbon Mass Fraction (E10)	--
Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)	0.826	Weight Fraction CO2	--

Certification Summary Information Report

Test Group	VCRXD06.4573	Evaporative/Refueling Family	VCRXF0213TR0
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Consolidated List of Standards

Exhaust Standards

Cert Region	California + CAA Section 177 states	Cert/In-Use Code	Cert
Vehicle Class	MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	Standard Level	Other
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	--	--	--	0	0	1	0	999.9
150,000 miles	NMOG	--	--	--	0	0	1	0	999.999
150,000 miles	NMOG+NOX	--	--	--	0	0	1	0	999.999
150,000 miles	NOX	--	--	--	0	0	1	0	999.999
150,000 miles	PM	--	--	--	0	0	1	0	999.999

Cert Region	California + CAA Section 177 states	Cert/In-Use Code	Cert
Vehicle Class	MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	Standard Level	Other
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	--	--	--	0	0	1	0	999.999
150,000 miles	NMOG	--	--	--	0	0	1	0	999.999
150,000 miles	NMOG+NOX	--	--	--	0	0	1	0	999.999
150,000 miles	NOX	--	--	--	0	0	1	0	999.999
150,000 miles	PM	--	--	--	0	0	1	0	999.999

Certification Summary Information Report

Test Group	VCRXD06.4573	Evaporative/Refueling Family	VCRXF0213TR0
Cert Region	California + CAA Section 177 states	Cert/In-Use Code	Cert
Vehicle Class	MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	Standard Level	Other
Fuel	Gasoline	Test Procedure	California 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	0	1	0	6.4
150,000 miles	CO-COMP	--	--	--	0	0	1	0	22.0
150,000 miles	CO2	--	--	--	0	0	1	0	999.9
150,000 miles	HCHO	--	--	--	0	0	1	0	0.006
150,000 miles	METHANE	--	--	--	0	0	1	0	999.99
150,000 miles	METHANE-COMB	--	--	--	0	0	1	0	0.05
150,000 miles	N2O	--	--	--	0	0	1	0	999.99
150,000 miles	N2O-COMB	--	--	--	0	0	1	0	0.05
150,000 miles	NMOG	--	--	--	0	0	1	0	999.999
150,000 miles	NMOG+NOX	--	--	--	0	0	1	0	0.250
150,000 miles	NMOG+NOX-COMP	--	--	--	0	0	1	0	0.800
150,000 miles	NOX	--	--	--	0	0	1	0	999.999
150,000 miles	PM	--	--	--	0	0	1	0	0.008
150,000 miles	PM-COMP	--	--	--	0	0	1	0	0.010

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 250
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	0	1	0	999.9
150,000 miles	METHANE	--	--	--	0	0	1	0	999.99
150,000 miles	N2O	--	--	--	0	0	1	0	999.99
150,000 miles	NMOG	--	--	--	0	0	1	0	999.999
150,000 miles	NMOG+NOX	--	--	--	0	0	1	0	0.250
150,000 miles	NOX	--	--	--	0	0	1	0	999.999

Certification Summary Information Report

Test Group	VCRXD06.4573	Evaporative/Refueling Family	VCRXF0213TR0
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 250
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	--	--	--	0	0	1	0	999.9
150,000 miles	NMOG	--	--	--	0	0	1	0	999.999
150,000 miles	NMOG+NOX	--	--	--	0	0	1	0	999.999
150,000 miles	NOX	--	--	--	0	0	1	0	999.999
150,000 miles	PM	--	--	--	0	0	1	0	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 250
Fuel	Gasoline	Test Procedure	California 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	0	1	0	6.4
150,000 miles	CO-COMP	--	--	--	0	0	1	0	22.0
150,000 miles	CO2	--	--	--	0	0	1	0	999.9
150,000 miles	HCHO	--	--	--	0	0	1	0	0.006
150,000 miles	METHANE	--	--	--	0	0	1	0	999.99
150,000 miles	METHANE-COMB	--	--	--	0	0	1	0	0.05
150,000 miles	N2O	--	--	--	0	0	1	0	999.99
150,000 miles	N2O-COMB	--	--	--	0	0	1	0	0.05
150,000 miles	NMOG	--	--	--	0	0	1	0	999.999
150,000 miles	NMOG+NOX	--	--	--	0	0	1	0	0.250
150,000 miles	NMOG+NOX-COMP	--	--	--	0	0	1	0	0.800
150,000 miles	NOX	--	--	--	0	0	1	0	999.999
150,000 miles	PM	--	--	--	0	0	1	0	0.008
150,000 miles	PM-COMP	--	--	--	0	0	1	0	0.010

Certification Summary Information Report

Test Group	VCRXD06.4573	Evaporative/Refueling Family	VCRXF0213TR0
Cert Region	California + CAA Section 177 states	Cert/In-Use Code	Cert
Vehicle Class	MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)	Standard Level	Other
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	0	1	0	999.9
150,000 miles	METHANE	--	--	--	0	0	1	0	999.99
150,000 miles	N2O	--	--	--	0	0	1	0	999.99
150,000 miles	NMOG	--	--	--	0	0	1	0	999.999
150,000 miles	NMOG+NOX	--	--	--	0	0	1	0	0.250
150,000 miles	NOX	--	--	--	0	0	1	0	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 250
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	--	--	--	0	0	1	0	999.9
150,000 miles	NMOG	--	--	--	0	0	1	0	999.999
150,000 miles	NMOG+NOX	--	--	--	0	0	1	0	999.999
150,000 miles	NOX	--	--	--	0	0	1	0	999.999
150,000 miles	PM	--	--	--	0	0	1	0	999.999

Evaporative/Refueling Standards

Evaporative/Refueling Family	VCRXF0213TR0	Cert Region	California + CAA Section 177 states
Cert/In-Use Code	Cert	Standard Level	Other
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	VCRXD06.4573		Evaporative/Refueling Family	VCRXF0213TR0	
Evaporative/Refueling Family	VCRXF0213TR0		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	0.0057
Evaporative/Refueling Family	VCRXF0213TR0		Cert Region	California + CAA Section 177 states	
Cert/In-Use Code	Cert		Standard Level	Other	
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	0.009
Evaporative/Refueling Family	VCRXF0213TR0		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	0.009
Evaporative/Refueling Family	VCRXF0213TR0		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
Evaporative/Refueling Family	VCRXF0213TR0		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	VCRXF0213TR0		Cert Region	California + CAA Section 177 states	
Cert/In-Use Code	Cert		Standard Level	Other	
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

Certification Summary Information Report

Test Group	VCRXD06.4573	Evaporative/Refueling Family	VCRXF0213TR0		
Evaporative/Refueling Family	VCRXF0213TR0	Cert Region	California + CAA Section 177 states		
Cert/In-Use Code	Cert	Standard Level	Other		
Test Procedure	2-day evap				
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV	--	0.600	0.0057

Certification Summary Information Report

Test Group	VCRXD06.4573	Evaporative/Refueling Family	VCRXF0213TR0
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	COMB-CREE	Combined Carbon-Related Exhaust Emissions
CO	Carbon Monoxide	COMB-OPT-CREE	Combined Optional Carbon-Related Exhaust Emissions
CO2	Carbon dioxide	HC-TOTAL-EQUIV	Total Hydrocarbon equivalent - Evap only
CREE	Carbon-Related Exhaust Emissions	METHANE-COMB	Combined CH4 for HD 2b/3 vehicles only
OPT-CREE	Optional Carbon-Related Exhaust Emissions	N2O-COMB	Combined Nitrous Oxide for HD 2b/3 vehicles only
NOX	Nitrogen Oxide	LEAK-DIA	Effective Leak Diameter (inches)
PM	Particulate Matter	LEAK-GAS CAP	Gas Cap Leakage (cc/min)
PM-COMP	SFTP Composite Particulate Matter	CO2-COMB	Combined Carbon Dioxide for HD 2b/3 Vehicles Only
HC-NM	Non-methane Hydrocarbon	KW-HRS	Integrated DC KW-HRS
OMHCE	Organic material Hydrocarbon Equivalent	CH4 BAG 1	Bag 1 Methane
OMNMHCE	Organic material non-methane HC equivalent	CH4 BAG 2	Bag 2 Methane
NMOG	Non-methane organic gases	CH4 BAG 3	Bag 3 Methane
HCHO	Formaldehyde	CH4 BAG 4	Bag 4 Methane
H3C2HO	Acetaldehyde	CO BAG 1	Bag 1 Carbon Monoxide
HC-NM+NOX	SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03	CO BAG 2	Bag 2 Carbon Monoxide
HC-NM+NOX-COMP	SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides	CO BAG 3	Bag 3 Carbon Monoxide
CO-COMP	SFTP Composite Carbon Monoxide	CO BAG 4	Bag 4 Carbon Monoxide
ETHANOL	C2H5OH - Ethanol	NMOG BAG 1	Bag 1 Non-methane organic gases
FE BAG 1	Bag 1 Fuel Economy	NMOG BAG 2	Bag 2 Non-methane organic gases
FE BAG 2	Bag 2 Fuel Economy	NMOG BAG 3	Bag 3 Non-methane organic gases
FE BAG 3	Bag 3 Fuel Economy	NMOG BAG 4	Bag 4 Non-methane organic gases
FE BAG 4	Bag 4 Fuel Economy	ACT-DISTANCE BAG 1	Bag 1 Actual Distance
MFR FE	Manufacturer Fuel Economy	ACT-DISTANCE BAG 2	Bag 2 Actual Distance
HC	Hydrocarbon for Running Loss and ORVR	ACT-DISTANCE BAG 3	Bag 3 Actual Distance
METHANE	CH4 - Methane	ACT-DISTANCE BAG 4	Bag 4 Actual Distance
METHANOL	CH3OH - Methanol	HC-TOTAL BAG 1	Bag 1 Total Hydrocarbon
N2O	Nitrous Oxide	HC-TOTAL BAG 2	Bag 2 Total Hydrocarbon
SPITBACK	Spitback Hydrocarbon in grams	HC-TOTAL BAG 3	Bag 3 Total Hydrocarbon
AMP-HRS	Integrated Amp-hours	HC-TOTAL BAG 4	Bag 4 Total Hydrocarbon
START-SOC	System Start State of Charge Watt-hours	WATT-HRS BAG 1	Bag 1 Watt Hours
END-SOC	System End State of Charge Watt-hours	WATT-HRS BAG 2	Bag 2 Watt Hours

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ACT-DISTANCE	Actual Distance Driven (miles)		WATT-HRS BAG 3	Bag 3 Watt Hours	
AS-VOLT	Average System Voltage		WATT-HRS BAG 4	Bag 4 Watt Hours	
CO2 BAG 1	Bag 1 Carbon Dioxide		WATT-HRS	Watt Hours	
CO2 BAG 2	Bag 2 Carbon Dioxide		HC-NM BAG 1	Bag 1 Non-methane Hydrocarbon	
CO2 BAG 3	Bag 3 Carbon Dioxide		HC-NM BAG 2	Bag 2 Non-methane Hydrocarbon	
CO2 BAG 4	Bag 4 Carbon Dioxide		HC-NM BAG 3	Bag 3 Non-methane Hydrocarbon	
NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides		HC-NM BAG 4	Bag 4 Non-methane Hydrocarbon	
NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides		N2O BAG 1	Bag 1 Nitrous Oxide	
DT-IWRR	Drive Trace Inertia Work Ratio Rating		N2O BAG 2	Bag 2 Nitrous Oxide	
DT-ASCR	Drive Trace Absolute Speed Change Rating		N2O BAG 3	Bag 3 Nitrous Oxide	
DT-EER	Drive Trace Energy Economy Rating		N2O BAG 4	Bag 4 Nitrous Oxide	
Certification Region					
CA	California + CAA Section 177 states		FA	Federal	
Exhaust Emission Standard Level					
B1	Federal Tier 2 Bin 1		HDV2B340	Federal Tier 3 HD Class 2b Transitional Bin 340	
B2	Federal Tier 2 Bin 2		HDV2B250	Federal Tier 3 HD Class 2b Bin 250	
B3	Federal Tier 2 Bin 3		HDV2B200	Federal Tier 3 HD Class 2b Bin 200	
B4	Federal Tier 2 Bin 4		HDV2B170	Federal Tier 3 HD Class 2b Bin 170	
B5	Federal Tier 2 Bin 5		HDV2B150	Federal Tier 3 HD Class 2b Bin 150	
B6	Federal Tier 2 Bin 6		HDV2B0	Federal Tier 3 HD Class 2b Bin 0	
B7	Federal Tier 2 Bin 7		HDV3B630	Federal Tier 3 HD Class 3 Transitional Bin 630	
B8	Federal Tier 2 Bin 8		HDV3B570	Federal Tier 3 HD Class 3 Transitional Bin 570	
B9	Federal Tier 2 Bin 9		HDV3B400	Federal Tier 3 HD Class 3 Bin 400	
B10	Federal Tier 2 Bin 10		HDV3B270	Federal Tier 3 HD Class 3 Bin 270	
B11	Federal Tier 2 Bin 11		HDV3B230	Federal Tier 3 HD Class 3 Bin 230	
HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)		HDV3B200	Federal Tier 3 HD Class 3 Bin 200	
HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)		HDV3B0	Federal Tier 3 HD Class 3 Bin 0	
L2	California LEV-II LEV		L4SULEV100	California LEV-IV SULEV100	
L2OP	California LEV-II LEV Optional		L4SULEV125	California LEV-IV SULEV125	
U2	California LEV-II ULEV		L4SULEV15	California LEV-IV SULEV15	
S2	California LEV-II SULEV		L4SULEV150	California LEV-IV SULEV150	
ZEV	California ZEV		L4SULEV170	California LEV-IV SULEV170	
OT	Other		L4SULEV175	California LEV-IV SULEV175	
T1	Federal Tier 1		L4SULEV20	California LEV-IV SULEV20	
PZEV	California PZEV		L4SULEV200	California LEV-IV SULEV200	
L2LEV160	California LEV-II LEV160		L4SULEV230	California LEV-IV SULEV230	
L2ULEV125	California LEV-II ULEV125		L4SULEV25	California LEV-IV SULEV25	
L2SULEV30	California LEV-II SULEV30		L4SULEV30	California LEV-IV SULEV30	
L2LEV395	California LEV-II LEV395		L4SULEV75	California LEV-IV SULEV75	

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L2ULEV340	California LEV-II ULEV340	L4SULEV85	California LEV-IV SULEV85
L2LEV630	California LEV-II LEV630	L4ULEV125	California LEV-IV ULEV125
L2ULEV570	California LEV-II ULEV570	L4ULEV200	California LEV-IV ULEV200
L3LEV160	California LEV-III LEV160	L4ULEV250	California LEV-IV ULEV250
L3ULEV125	California LEV-III ULEV125	L4ULEV270	California LEV-IV ULEV270
L3ULEV70	California LEV-III ULEV70	L4ULEV40	California LEV-IV ULEV40
L3ULEV50	California LEV-III ULEV50	L4ULEV400	California LEV-IV ULEV400
L3SULEV30	California LEV-III SULEV30	L4ULEV50	California LEV-IV ULEV50
L3SULEV20	California LEV-III SULEV20	L4ULEV60	California LEV-IV ULEV60
L3LEV395	California LEV-III LEV395	L4ULEV70	California LEV-IV ULEV70
L3ULEV340	California LEV-III ULEV340	T4B170	Federal Tier 4 MDV Bin 170
L3ULEV250	California LEV-III ULEV250	T4B150	Federal Tier 4 MDV Bin 150
L3ULEV200	California LEV-III ULEV200	T4B125	Federal Tier 4 MDV Bin 125
L3SULEV170	California LEV-III SULEV170	T4B100	Federal Tier 4 MDV Bin 100
L3SULEV150	California LEV-III SULEV150	T4B85	Federal Tier 4 MDV Bin 85
L3LEV630	California LEV-III LEV630	T4B75	Federal Tier 4 MDV Bin 75
L3ULEV570	California LEV-III ULEV570	T4B70	Federal Tier 4 Bin 70
L3ULEV400	California LEV-III ULEV400	T4B65	Federal Tier 4 Bin 65
L3ULEV270	California LEV-III ULEV270	T4B60	Federal Tier 4 Bin 60
L3SULEV230	California LEV-III SULEV230	T4B55	Federal Tier 4 Bin 55
L3SULEV200	California LEV-III SULEV200	T4B50	Federal Tier 4 Bin 50
T3B160	Federal Tier 3 Bin 160	T4B45	Federal Tier 4 Bin 45
T3B125	Federal Tier 3 Bin 125	T4B40	Federal Tier 4 Bin 40
T3B110	Federal Tier 3 Transitional Bin 110	T4B35	Federal Tier 4 Bin 35
T3B85	Federal Tier 3 Transitional Bin 85	T4B30	Federal Tier 4 Bin 30
T3SULEV30	Federal Tier 3 Transitional LEV-II SULEV30 Carryover	T4B25	Federal Tier 4 Bin 25
T3B70	Federal Tier 3 Bin 70	T4B20	Federal Tier 4 Bin 20
T3B50	Federal Tier 3 Bin 50	T4B15	Federal Tier 4 Bin 15
T3B30	Federal Tier 3 Bin 30	T4B10	Federal Tier 4 Bin 10
T3B20	Federal Tier 3 Bin 20	T4B5	Federal Tier 4 Bin 5
T3B0	Federal Tier 3 Bin 0	T4B0	Federal Tier 4 Bin 0
HDV2B395	Federal Tier 3 HD Class 2b Transitional Bin 395		
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

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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