

Certification Summary Information Report

Manufacturer	Canoo Technologies Inc	Manufacturer Code	CAN
Test Group	PCANJ.000261	Evaporative/Refueling Family	--
Certificate Number	PCANJ.000261-001	CARB Executive Order #	--
Certificate Issue Date	03/17/2023	Certificate Revision Date	--
Certificate Effective Date	03/17/2023	Conditional Certificate	No
CSI Revision #	--	CSI Submission/Revision Date	03/10/2023 03:17:54 PM
Model Year	2023		

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: Electric Motor

Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator
Electricity	--	--

Hybrid Indicator	No		
Multiple Fuel Storage	--	Rechargeable Energy Storage System Indicator	Yes
Multiple Fuel Combustion	--	Off-board Charge Capable Indicator	Yes
Fuel Cell Indicator	Yes	EPA Vehicle Class	LDT2
Federal Clean Fuel Vehicle	Yes	Federal Clean Fuel Vehicle Standard	ZEV
Federal Clean Fuel Vehicle ILEV	No	California Partial Zero Emissions Vehicle Indicator	--
Durability Group Name	PCANEEVNN261	Durability Group Equivalency Factor	1
Reduced Fee Test Group	No	Certification Region Code(s)	FA
Complies with HD GHG 2b/3 regulations?	No		
Introduction into Commerce Date	03/13/2023	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	--
SFTP LEV-III Composite Compliance Indicator	No		
OBD Compliance Type	Federal	OBD Demonstration Vehicle Test Group	PCANJ.000261
Test Group OBD Compliance Level	Full - no deficiencies	Number of Test Group OBD Deficiencies	0
OBD Deficiencies Comments	This is a BEV- No OBD requirements.		
Mfr Test Group Comments	--		
Mfr Exhaust / Evap Standards Comments	--		

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Test Group	PCANJ.000261		Evaporative/Refueling Family		--	
Models Covered by this Certificate						
Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - Type	- # of Gears
Canoo Technologies Inc	1 - Canoo Technologies Inc	1 - Lifestyle Delivery Vehicle	Federal	2-Wheel Drive, Rear	Automatic	1
Trans - Lockup						
No						
Engine Description						
Hybrid Type		--		Hybrid Description		--
Engine Type		--		Mfr Engine Description		--
Engine Block Arrangement		--		Mfr Engine Block Arrangement Description		--
Camless Valvetrain Indicator		--		Oil Viscosity/Classification		--
Number of Cylinders/Rotors		--		Mechanically Variable Compression Ratio Indicator		--
After Treatment Device(s) (ATD)						
Mfr After Treatment Device (ATD) Comments		--				
Direct Ozone Reduction (DOR) Device		--				
Mfr Emission Control Device Comments		--				
Official Test Numbers						
Test Group Fuel	FTP	US06	SC03	Cold CO	Highway	EPA City Litmus Value
Electricity	--	--	--	--	--	--
						EPA City Litmus Threshold
						--
						EPA Highway Litmus Value
						--
						EPA Highway Litmus Threshold
						--
						CREE Weighting Factor
						--
SFTP LEV-III Official Test Numbers						
Test Group Fuel	FTP		US06		SC03	
Electricity	--		--		--	
Official Charge Depleting Test Numbers						
Test Group Fuel	UDDS		Highway			
Electricity	NCAN10079087		NCAN10079088			

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Test Group	PCANJ.000261	Evaporative/Refueling Family	--
Hybrid Electric Vehicle And Fuel Cell Information			
Rechargable Energy Storage System	Battery(s)	Rechargable Energy Storage System, if Other	--
Battery Type	Lithium Ion	Number of Battery Packs	1
Total Voltage of Battery Packs	346	Battery Energy Capacity	225
Battery Specific Energy	80	Battery Charger Type	On-Board
Number of Capacitors	--	Capacitor Rating (In Farads)	--
Mfr Capacitor Comments	--		
Hydraulic System Description	--		
Regenerative Braking Type	Electrical Regen Brake		
Regenerative Braking Source	Rear Wheels	Driver Controlled Regenerative Braking	Yes
Mfr Regenerative Braking Description	--		
Drive Motor(s)/Generator(s)	1		
Motor/Generator Type 1	AC Induction	Rated Motor/Generator Power	261
Mfr Fuel Cell Description	N/A		
Fuel Cell On-Board H2 Storage Capacity (kg)	--	Usable H2 Fill Capacity (kg)	--
Mfr Hybrid Electric/ Electric Vehicle Comments	--		

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Test Group	PCANJ.000261		Evaporative/Refueling Family	--						
Emission Data Vehicle Information										
Vehicle ID / Configuration	GR40 / 0		Manufacturer Vehicle Configuration Number	0						
Original Test Group Name	NCANJ.000261		Original Evaporative/Refueling Family	--						
Original Test Vehicle Model Year	2022									
Vehicle Model										
Represented Test Vehicle Make	Canoo		Represented Test Vehicle Model	Lifestyle Delivery Vehicle (LDV)						
Leak Family Details										
Leak Family Identifier	--		Leak Family Name	--						
Drive Sources and Fuel System Details										
<table border="1"> <tr> <th>Drive Source and Fuel#</th> <th>Drive Source</th> <th>Fuel</th> </tr> <tr> <td>1</td> <td>Electric Motor</td> <td>Electricity</td> </tr> </table>					Drive Source and Fuel#	Drive Source	Fuel	1	Electric Motor	Electricity
Drive Source and Fuel#	Drive Source	Fuel								
1	Electric Motor	Electricity								
Hybrid Indicator	No		Multiple Fuel Combustion	--						
Multiple Fuel Storage	--		Rechargeable Energy Storage System Indicator	Yes						
Fuel Cell Indicator	No		Rechargeable Energy Storage System, if 'Other'	--						
Rechargeable Energy Storage System	Battery(s)									
Off-board charge Capable Indicator	Yes									
Odometer Correction -- Initial	1		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	261		Rated Horsepower	350						
Displacement (liters)	0.01									
Air Aspiration Method	Naturally Aspirated		Air Aspiration Method, if 'Other'							
Number of Air Aspiration Devices	--		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	4,000 (mi)						
Curb Weight (lbs)	4514		Equivalent Test Weight (pounds)	4750						
GVWR (lbs)	--		N/V Ratio	1.1						
Axle Ratio	8.97									
Transmission Type	Automatic		# of Transmission Gears	1						
Transmission Lockup	No		Creep Gear	No						
Dynamometer Coefficients:										
Target Coefficients			Set Coefficients							
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients						
City/Highway/Evap	25.054	0.41733	0.026047	14.8						
Emission Control Device Comments										
N/A - this is a BEV										

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Test Group	PCANJ.000261	Evaporative/Refueling Family	--
Manufacturer Test Vehicle Comments	N/V ratio is 110.47. Data entered is a placeholder due to CDX issues.		

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Test Group	PCANJ.000261	Evaporative/Refueling Family	--																																									
Test #	NCAN10078405	Test Procedure	84 - Charge Depleting Highway																																									
Exhaust Test # for this Evap Test	--	Test Fuel Type	62 - Electricity																																									
Test Date	11/11/2022	Fuel	Electricity																																									
Fuel Batch ID	--	Fuel Calibration Number	--																																									
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	DF Type	Mfr. Determined																																									
Verify Test Lab ID	Volkswagen Test Center Oxnard																																											
E10 Evaporative Test Measurement Method	--																																											
Test Start Odometer Reading	2602	Odometer Units	K																																									
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--																																									
State of Charge Delta	Yes																																											
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	Road Speed Fan Usage	Yes																																									
PHEV/EV Charge Depleting Test Information																																												
Recharge Event Voltage	240	Recharge Event Energy (kiloWatt-hours)	85.868																																									
Charge Depleting Range (Calculated miles)	289.7	Charge Depleting Range (Actual miles)	289.7																																									
All Electric Range Unadjusted (miles)	--	Derived 5-Cycle Coefficient Model Year	--																																									
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Number of Charge Depleting Bags/Phases Conducted	2	Transition Bag/Phase Number	--																																									
Charge Depleting Bag/Phase																																												
	<table border="1"> <thead> <tr> <th>Charge Depleting Bag/Phase #</th> <th>Test Result/Emission Name</th> <th>Unrounded Test Result</th> </tr> </thead> <tbody> <tr><td>1</td><td>Carbon Monoxide</td><td>0</td></tr> <tr><td>2</td><td>Carbon dioxide</td><td>0</td></tr> <tr><td>3</td><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr> <tr><td>4</td><td>Drive Trace Absolute Speed Change Rating</td><td>2.53</td></tr> <tr><td>5</td><td>Drive Trace Energy Economy Rating</td><td>-0.346</td></tr> <tr><td>6</td><td>Drive Trace Inertia Work Ratio Rating</td><td>3.403</td></tr> <tr><td>7</td><td>Manufacturer Fuel Economy</td><td>113.7</td></tr> <tr><td>8</td><td>Nitrogen Oxide</td><td>0</td></tr> <tr><td>9</td><td>Non-methane organic gases</td><td>0</td></tr> <tr><td>10</td><td>Non-methane organic gases plus Nitrogen Oxides</td><td>999.999</td></tr> <tr><td>11</td><td>Particulate Matter</td><td>0</td></tr> <tr><td>12</td><td>System End State of Charge Watt-hours</td><td>11.7668</td></tr> <tr><td>13</td><td>System Start State of Charge Watt-hours</td><td>14.3595</td></tr> </tbody> </table>	Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result	1	Carbon Monoxide	0	2	Carbon dioxide	0	3	Carbon-Related Exhaust Emissions	0	4	Drive Trace Absolute Speed Change Rating	2.53	5	Drive Trace Energy Economy Rating	-0.346	6	Drive Trace Inertia Work Ratio Rating	3.403	7	Manufacturer Fuel Economy	113.7	8	Nitrogen Oxide	0	9	Non-methane organic gases	0	10	Non-methane organic gases plus Nitrogen Oxides	999.999	11	Particulate Matter	0	12	System End State of Charge Watt-hours	11.7668	13	System Start State of Charge Watt-hours	14.3595	
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Test Group	PCANJ.000261	Evaporative/Refueling Family	--																																										
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Manufacturer Test Comments DC energy consumption HWFE1 = 270.8 Wh/mi; HWFE2 = 252.7 Wh/mi; HWFE average = 261.7 Wh/m. **Start SOC and End SOC for each phase for tables above are entered as Kilowatt Hours, due to value limit of 9999.99.**																																													
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	4,000 miles	Federal Tier 3 Bin 0	CO	0	--	--	--	0	--	0	0	Pass																																	
Fed	4,000 miles	Federal Tier 3 Bin 0	CO	0	--	--	--	0	--	0	0	Pass																																	
Fed	4,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--																																	
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Certification Summary Information Report

Test Group	PCANJ.000261	Evaporative/Refueling Family	--																																						
Test #	NCAN10078406	Test Procedure	81 - Charge Depleting UDDS																																						
Exhaust Test # for this Evap Test	--	Test Fuel Type	62 - Electricity																																						
Test Date	11/11/2022	Fuel	Electricity																																						
Fuel Batch ID	--	Fuel Calibration Number	--																																						
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	DF Type	Mfr. Determined																																						
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Charge Depleting Range (Calculated miles)	355.5	Charge Depleting Range (Actual miles)	355.5																																						
All Electric Range Unadjusted (miles)	--	Derived 5-Cycle Coefficient Model Year	--																																						
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Charge Depleting Bag/Phase																																									

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Test Group	PCANJ.000261	Evaporative/Refueling Family	--
Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result	
13	Carbon Monoxide	0	
14	Carbon dioxide	0	
15	Carbon-Related Exhaust Emissions	0	
16	Drive Trace Absolute Speed Change Rating	-1.83	
17	Drive Trace Energy Economy Rating	-1.286	
18	Drive Trace Inertia Work Ratio Rating	-2.269	
19	Manufacturer Fuel Economy	139.5	
20	Nitrogen Oxide	0	
21	Non-methane organic gases	0	
22	Non-methane organic gases plus Nitrogen Oxides	999.999	
23	System End State of Charge Watt-hours	10.2418	
24	System Start State of Charge Watt-hours	11.7668	

Charge Depleting Bag/Phase

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result	
25	Carbon Monoxide	0	
26	Carbon dioxide	0	
27	Carbon-Related Exhaust Emissions	0	
28	Drive Trace Absolute Speed Change Rating	0.09	
29	Drive Trace Energy Economy Rating	0.27	
30	Drive Trace Inertia Work Ratio Rating	0.376	
31	Manufacturer Fuel Economy	139.5	
32	Nitrogen Oxide	0	
33	Non-methane organic gases	0	
34	Non-methane organic gases plus Nitrogen Oxides	999.999	
35	Particulate Matter	0	
36	System End State of Charge Watt-hours	73.4491	
37	System Start State of Charge Watt-hours	75.8256	

Charge Depleting Bag/Phase

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Test Group	PCANJ.000261	Evaporative/Refueling Family	--																																										
<table><tr><th>Charge Depleting Bag/Phase #</th><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>38</td><td>Carbon Monoxide</td><td>0</td></tr><tr><td>39</td><td>Carbon dioxide</td><td>0</td></tr><tr><td>40</td><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>41</td><td>Drive Trace Absolute Speed Change Rating</td><td>-0.68</td></tr><tr><td>42</td><td>Drive Trace Energy Economy Rating</td><td>-0.216</td></tr><tr><td>43</td><td>Drive Trace Inertia Work Ratio Rating</td><td>-0.452</td></tr><tr><td>44</td><td>Manufacturer Fuel Economy</td><td>139.5</td></tr><tr><td>45</td><td>Nitrogen Oxide</td><td>0</td></tr><tr><td>46</td><td>Non-methane organic gases</td><td>0</td></tr><tr><td>47</td><td>Non-methane organic gases plus Nitrogen Oxides</td><td>999.999</td></tr><tr><td>48</td><td>Particulate Matter</td><td>0</td></tr><tr><td>49</td><td>System End State of Charge Watt-hours</td><td>69.0227</td></tr><tr><td>50</td><td>System Start State of Charge Watt-hours</td><td>70.6685</td></tr></table>				Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result	38	Carbon Monoxide	0	39	Carbon dioxide	0	40	Carbon-Related Exhaust Emissions	0	41	Drive Trace Absolute Speed Change Rating	-0.68	42	Drive Trace Energy Economy Rating	-0.216	43	Drive Trace Inertia Work Ratio Rating	-0.452	44	Manufacturer Fuel Economy	139.5	45	Nitrogen Oxide	0	46	Non-methane organic gases	0	47	Non-methane organic gases plus Nitrogen Oxides	999.999	48	Particulate Matter	0	49	System End State of Charge Watt-hours	69.0227	50	System Start State of Charge Watt-hours	70.6685
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Manufacturer Test Comments DC energy consumption UDDS 1 = 319.4 Wh/mi; UDDS2 = 220.6 Wh/mi; UDDS3 = 203.0 Wh/mi; UDDS4 = 206.1 Wh/mi; UDDS weighted = 213.3 Wh/mi; UDDS1 DC discharge energy = 2376.5 Wh/mi; MCT UBE energy = 75825.6 Wh. **Start SOC and End SOC for each phase for tables above are entered as Kilowatt Hours, due to value limit of 9999.99.**																																													
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	4,000 miles	Federal Tier 3 Bin 0	CO	0	--	--	--	0	--	0	0	Pass																																	
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Fed	4,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--																																	
Fed	4,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--																																	
Fed	4,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--																																	
Fed	4,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--																																	

Certification Summary Information Report

Test Group	PCANJ.000261	Evaporative/Refueling Family	--																																									
Test #	NCAN10079087	Test Procedure	81 - Charge Depleting UDDS																																									
Exhaust Test # for this Evap Test	--	Test Fuel Type	62 - Electricity																																									
Test Date	03/01/2023	Fuel	Electricity																																									
Fuel Batch ID	--	Fuel Calibration Number	--																																									
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	DF Type	Mfr. Determined																																									
Verify Test Lab ID	NVFEL																																											
E10 Evaporative Test Measurement Method	--																																											
Test Start Odometer Reading	3137	Odometer Units	K																																									
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--																																									
State of Charge Delta	Yes																																											
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	Road Speed Fan Usage	Yes																																									
PHEV/EV Charge Depleting Test Information																																												
Recharge Event Voltage	243.4	Recharge Event Energy (kiloWatt-hours)	85.306																																									
Charge Depleting Range (Calculated miles)	335.86	Charge Depleting Range (Actual miles)	335.86																																									
All Electric Range Unadjusted (miles)	--	Derived 5-Cycle Coefficient Model Year	--																																									
Equivalent All Electric Range (miles)	335.86																																											
Number of Charge Depleting Bags/Phases Conducted	4	Transition Bag/Phase Number	--																																									
Charge Depleting Bag/Phase																																												
	<table border="1"> <thead> <tr> <th>Charge Depleting Bag/Phase #</th> <th>Test Result/Emission Name</th> <th>Unrounded Test Result</th> </tr> </thead> <tbody> <tr><td>1</td><td>Carbon Monoxide</td><td>0</td></tr> <tr><td>2</td><td>Carbon dioxide</td><td>0</td></tr> <tr><td>3</td><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr> <tr><td>4</td><td>Drive Trace Absolute Speed Change Rating</td><td>1.03</td></tr> <tr><td>5</td><td>Drive Trace Energy Economy Rating</td><td>1.182</td></tr> <tr><td>6</td><td>Drive Trace Inertia Work Ratio Rating</td><td>1.782</td></tr> <tr><td>7</td><td>Manufacturer Fuel Economy</td><td>132.7</td></tr> <tr><td>8</td><td>Nitrogen Oxide</td><td>0</td></tr> <tr><td>9</td><td>Non-methane organic gases</td><td>0</td></tr> <tr><td>10</td><td>Non-methane organic gases plus Nitrogen Oxides</td><td>999.999</td></tr> <tr><td>11</td><td>Particulate Matter</td><td>0</td></tr> <tr><td>12</td><td>System End State of Charge Watt-hours</td><td>73.8778</td></tr> <tr><td>13</td><td>System Start State of Charge Watt-hours</td><td>76.3276</td></tr> </tbody> </table>	Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result	1	Carbon Monoxide	0	2	Carbon dioxide	0	3	Carbon-Related Exhaust Emissions	0	4	Drive Trace Absolute Speed Change Rating	1.03	5	Drive Trace Energy Economy Rating	1.182	6	Drive Trace Inertia Work Ratio Rating	1.782	7	Manufacturer Fuel Economy	132.7	8	Nitrogen Oxide	0	9	Non-methane organic gases	0	10	Non-methane organic gases plus Nitrogen Oxides	999.999	11	Particulate Matter	0	12	System End State of Charge Watt-hours	73.8778	13	System Start State of Charge Watt-hours	76.3276	
Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result																																										
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7	Manufacturer Fuel Economy	132.7																																										
8	Nitrogen Oxide	0																																										
9	Non-methane organic gases	0																																										
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12	System End State of Charge Watt-hours	73.8778																																										
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Charge Depleting Bag/Phase																																												

Certification Summary Information Report

Test Group	PCANJ.000261	Evaporative/Refueling Family	--
Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result	
14	Carbon Monoxide	0	
15	Carbon dioxide	0	
16	Carbon-Related Exhaust Emissions	0	
17	Drive Trace Absolute Speed Change Rating	1.39	
18	Drive Trace Energy Economy Rating	0.146	
19	Drive Trace Inertia Work Ratio Rating	1.564	
20	Manufacturer Fuel Economy	132.7	
21	Nitrogen Oxide	0	
22	Non-methane organic gases	0	
23	Non-methane organic gases plus Nitrogen Oxides	999.999	
24	System End State of Charge Watt-hours	13.15418	
25	System Start State of Charge Watt-hours	14.72188	

Charge Depleting Bag/Phase

Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result	
26	Carbon Monoxide	0	
27	Carbon dioxide	0	
28	Carbon-Related Exhaust Emissions	0	
29	Drive Trace Absolute Speed Change Rating	0.61	
30	Drive Trace Energy Economy Rating	0.531	
31	Drive Trace Inertia Work Ratio Rating	1.729	
32	Manufacturer Fuel Economy	132.7	
33	Nitrogen Oxide	0	
34	Non-methane organic gases	0	
35	Non-methane organic gases plus Nitrogen Oxides	999.999	
36	System End State of Charge Watt-hours	8.86971	
37	System Start State of Charge Watt-hours	10.50158	

Charge Depleting Bag/Phase

Certification Summary Information Report

Test Group	PCANJ.000261	Evaporative/Refueling Family	--																																										
<table><tr><th>Charge Depleting Bag/Phase #</th><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>38</td><td>Carbon Monoxide</td><td>0</td></tr><tr><td>39</td><td>Carbon dioxide</td><td>0</td></tr><tr><td>40</td><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>41</td><td>Drive Trace Absolute Speed Change Rating</td><td>0.4</td></tr><tr><td>42</td><td>Drive Trace Energy Economy Rating</td><td>0.765</td></tr><tr><td>43</td><td>Drive Trace Inertia Work Ratio Rating</td><td>0.699</td></tr><tr><td>44</td><td>Manufacturer Fuel Economy</td><td>132.7</td></tr><tr><td>45</td><td>Nitrogen Oxide</td><td>0</td></tr><tr><td>46</td><td>Non-methane organic gases</td><td>0</td></tr><tr><td>47</td><td>Non-methane organic gases plus Nitrogen Oxides</td><td>999.999</td></tr><tr><td>48</td><td>Particulate Matter</td><td>0</td></tr><tr><td>49</td><td>System End State of Charge Watt-hours</td><td>69.12402</td></tr><tr><td>50</td><td>System Start State of Charge Watt-hours</td><td>70.88266</td></tr></table>				Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result	38	Carbon Monoxide	0	39	Carbon dioxide	0	40	Carbon-Related Exhaust Emissions	0	41	Drive Trace Absolute Speed Change Rating	0.4	42	Drive Trace Energy Economy Rating	0.765	43	Drive Trace Inertia Work Ratio Rating	0.699	44	Manufacturer Fuel Economy	132.7	45	Nitrogen Oxide	0	46	Non-methane organic gases	0	47	Non-methane organic gases plus Nitrogen Oxides	999.999	48	Particulate Matter	0	49	System End State of Charge Watt-hours	69.12402	50	System Start State of Charge Watt-hours	70.88266
Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result																																											
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45	Nitrogen Oxide	0																																											
46	Non-methane organic gases	0																																											
47	Non-methane organic gases plus Nitrogen Oxides	999.999																																											
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49	System End State of Charge Watt-hours	69.12402																																											
50	System Start State of Charge Watt-hours	70.88266																																											
Manufacturer Test Comments DC energy consumption UDDS 1 = 332.85 Wh/mi; UDDS2 = 238.62 Wh/mi; UDDS3 = 212.14 Wh/mi; UDDS4 = 220.52 Wh/mi; UDDS weighted = 253.99 Wh/mi; UDDS1 DC discharge energy = 2449.8 Wh/mi; MCT UBE energy = 76327.56 Wh. **Start SOC and End SOC for each phase for tables above are entered as Kilowatt Hours, due to value limit of 9999.99.**																																													
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	4,000 miles	Federal Tier 3 Bin 0	CO	0	--	--	--	0	--	0	0	Pass																																	
Fed	4,000 miles	Federal Tier 3 Bin 0	CO	0	--	--	--	0	--	0	0	Pass																																	
Fed	4,000 miles	Federal Tier 3 Bin 0	CO	0	--	--	--	0	--	0	0	Pass																																	
Fed	4,000 miles	Federal Tier 3 Bin 0	CO	0	--	--	--	0	--	0	0	Pass																																	
Fed	4,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--																																	
Fed	4,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--																																	
Fed	4,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--																																	
Fed	4,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--																																	

Certification Summary Information Report

Test Group	PCANJ.000261	Evaporative/Refueling Family	--																																									
Test #	NCAN10079088	Test Procedure	84 - Charge Depleting Highway																																									
Exhaust Test # for this Evap Test	--	Test Fuel Type	62 - Electricity																																									
Test Date	03/01/2023	Fuel	Electricity																																									
Fuel Batch ID	--	Fuel Calibration Number	--																																									
Vehicle Class	LDT2 (LVW 3751-5750, GVW 0-6000)	DF Type	Mfr. Determined																																									
Verify Test Lab ID	Volkswagen Test Center Oxnard																																											
E10 Evaporative Test Measurement Method	--																																											
Test Start Odometer Reading	3137	Odometer Units	K																																									
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--																																									
State of Charge Delta	Yes																																											
Drive Cycle Speed Tolerance Criteria	Used Part 86 (+/- 2 mph, +/- 1 sec)	Road Speed Fan Usage	Yes																																									
PHEV/EV Charge Depleting Test Information																																												
Recharge Event Voltage	243.4	Recharge Event Energy (kiloWatt-hours)	85.306																																									
Charge Depleting Range (Calculated miles)	276.96	Charge Depleting Range (Actual miles)	276.96																																									
All Electric Range Unadjusted (miles)	--	Derived 5-Cycle Coefficient Model Year	--																																									
Equivalent All Electric Range (miles)	276.96																																											
Number of Charge Depleting Bags/Phases Conducted	2	Transition Bag/Phase Number	--																																									
Charge Depleting Bag/Phase																																												
	<table border="1"> <thead> <tr> <th>Charge Depleting Bag/Phase #</th> <th>Test Result/Emission Name</th> <th>Unrounded Test Result</th> </tr> </thead> <tbody> <tr><td>1</td><td>Carbon Monoxide</td><td>0</td></tr> <tr><td>2</td><td>Carbon dioxide</td><td>0</td></tr> <tr><td>3</td><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr> <tr><td>4</td><td>Drive Trace Absolute Speed Change Rating</td><td>9.41</td></tr> <tr><td>5</td><td>Drive Trace Energy Economy Rating</td><td>0.257</td></tr> <tr><td>6</td><td>Drive Trace Inertia Work Ratio Rating</td><td>10.95</td></tr> <tr><td>7</td><td>Manufacturer Fuel Economy</td><td>109.43</td></tr> <tr><td>8</td><td>Nitrogen Oxide</td><td>0</td></tr> <tr><td>9</td><td>Non-methane organic gases</td><td>0</td></tr> <tr><td>10</td><td>Non-methane organic gases plus Nitrogen Oxides</td><td>999.999</td></tr> <tr><td>11</td><td>Particulate Matter</td><td>0</td></tr> <tr><td>12</td><td>System End State of Charge Watt-hours</td><td>10.5016</td></tr> <tr><td>13</td><td>System Start State of Charge Watt-hours</td><td>13.1542</td></tr> </tbody> </table>	Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result	1	Carbon Monoxide	0	2	Carbon dioxide	0	3	Carbon-Related Exhaust Emissions	0	4	Drive Trace Absolute Speed Change Rating	9.41	5	Drive Trace Energy Economy Rating	0.257	6	Drive Trace Inertia Work Ratio Rating	10.95	7	Manufacturer Fuel Economy	109.43	8	Nitrogen Oxide	0	9	Non-methane organic gases	0	10	Non-methane organic gases plus Nitrogen Oxides	999.999	11	Particulate Matter	0	12	System End State of Charge Watt-hours	10.5016	13	System Start State of Charge Watt-hours	13.1542	
Charge Depleting Bag/Phase #	Test Result/Emission Name	Unrounded Test Result																																										
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Charge Depleting Bag/Phase																																												

Certification Summary Information Report

Test Group		PCANJ.000261		Evaporative/Refueling Family				--					
		Charge Depleting Bag/Phase #		Test Result/Emission Name		Unrounded Test Result							
		14		Carbon Monoxide		0							
		15		Carbon dioxide		0							
		16		Carbon-Related Exhaust Emissions		0							
		17		Drive Trace Absolute Speed Change Rating		5.94							
		18		Drive Trace Energy Economy Rating		0.764							
		19		Drive Trace Inertia Work Ratio Rating		7.055							
		20		Manufacturer Fuel Economy		109.43							
		21		Nitrogen Oxide		0							
		22		Non-methane organic gases		0							
		23		Non-methane organic gases plus Nitrogen Oxides		999.999							
		24		Particulate Matter		0							
		25		System End State of Charge Watt-hours		70.8827							
		26		System Start State of Charge Watt-hours		73.8778							
Manufacturer Test Comments				DC energy consumption HWFE1 = 291.64 Wh/mi; HWFE2 = 259.55 Wh/mi; HWFE average = 308.01 Wh/m. **Start SOC and End SOC for each phase for tables above are entered as Kilowatt Hours, due to value limit of 9999.99.**									
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	4,000 miles	Federal Tier 3 Bin 0	CO	0	--	--	--	0	--	0	0	Pass	
Fed	4,000 miles	Federal Tier 3 Bin 0	CO	0	--	--	--	0	--	0	0	Pass	
Fed	4,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--	
Fed	4,000 miles	Federal Tier 3 Bin 0	CREE	0	--	--	--	0	--	0	--	--	
Fuel Properties													

Certification Summary Information Report

Test Group		PCANJ.000261			Evaporative/Refueling Family		--		
Consolidated List of Standards									
Exhaust Standards									
Cert Region		Federal			Cert/In-Use Code		Cert		
Vehicle Class		LDT2 (LVW 3751-5750, GVW 0-6000)			Standard Level		Federal Tier 3 Bin 0		
Fuel		Electricity			Test Procedure		Charge Depleting UDDS		
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	--	--	--	--	--	--	0	0
4,000 miles	CO-COMP	--	--	--	--	--	--	0	0
4,000 miles	CREE	--	--	--	--	--	--	0	0
4,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	0	0
Cert Region		Federal			Cert/In-Use Code		Cert		
Vehicle Class		LDT2 (LVW 3751-5750, GVW 0-6000)			Standard Level		Federal Tier 3 Bin 0		
Fuel		Electricity			Test Procedure		Charge Depleting Highway		
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	--	--	--	--	--	--	0	0
4,000 miles	CO-COMP	--	--	--	--	--	--	0	0
4,000 miles	CREE	--	--	--	--	--	--	0	0
4,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	0	0
Cert Region		Federal			Cert/In-Use Code		Cert		
Vehicle Class		LDT2 (LVW 3751-5750, GVW 0-6000)			Standard Level		Federal Tier 3 Bin 0		
Fuel		Electricity			Test Procedure		CVS 75 and later (w/o can. load)		
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	--	--	--	--	--	--	0	0
4,000 miles	CO-COMP	--	--	--	--	--	--	0	0
4,000 miles	CREE	--	--	--	--	--	--	0	0
4,000 miles	NMOG+NOX-COMP	--	--	--	--	--	--	0	0

Certification Summary Information Report

Test Group		PCANJ.000261	Evaporative/Refueling Family		--
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		METHANOL	CH3OH - Methanol	
CO	Carbon Monoxide		N2O	Nitrous Oxide	
CO2	Carbon dioxide		SPITBACK	Spitback Hydrocarbon in grams	
CREE	Carbon-Related Exhaust Emissions		AMP-HRS	Integrated Amp-hours	
OPT-CREE	Optional Carbon-Related Exhaust Emissions		START-SOC	System Start State of Charge Watt-hours	
NOX	Nitrogen Oxide		END-SOC	System End State of Charge Watt-hours	
PM	Particulate Matter		ACT-DISTANCE	Actual Distance Driven (miles)	
PM-COMP	SFTP Composite Particulate Matter		AS-VOLT	Average System Voltage	
HC-NM	Non-methane Hydrocarbon		CO2 BAG 1	Bag 1 Carbon Dioxide	
OMHCE	Organic material Hydrocarbon Equivalent		CO2 BAG 2	Bag 2 Carbon Dioxide	
OMNMHCE	Organic material non-methane HC equivalent		CO2 BAG 3	Bag 3 Carbon Dioxide	
NMOG	Non-methane organic gases		CO2 BAG 4	Bag 4 Carbon Dioxide	
HCHO	Formaldehyde		NMOG+NOX	Non-methane organic gases plus Nitrogen Oxides	
H3C2HO	Acetaldehyde		NMOG+NOX-COMP	SFTP Composite Non-methane Organic Gases + Nitrogen Oxides	
HC-NM+NOX	SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03		DT-IWRR	Drive Trace Inertia Work Ratio Rating	
HC-NM+NOX-COMP	SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides		DT-ASCR	Drive Trace Absolute Speed Change Rating	
CO-COMP	SFTP Composite Carbon Monoxide		DT-EER	Drive Trace Energy Economy Rating	
ETHANOL	C2H5OH - Ethanol		COMB-CREE	Combined Carbon-Related Exhaust Emissions	
FE BAG 1	Bag 1 Fuel Economy		COMB-OPT-CREE	Combined Optional Carbon-Related Exhaust Emissions	
FE BAG 2	Bag 2 Fuel Economy		HC-TOTAL-EQUIV	Total Hydrocarbon equivalent - Evap only	
FE BAG 3	Bag 3 Fuel Economy		METHANE-COMB	Combined CH4 for HD 2b/3 vehicles only	
FE BAG 4	Bag 4 Fuel Economy		N2O-COMB	Combined Nitrous Oxide for HD 2b/3 vehicles only	
MFR FE	Manufacturer Fuel Economy		LEAK-DIA	Effective Leak Diameter (inches)	
HC	Hydrocarbon for Running Loss and ORVR		LEAK-GAS CAP	Gas Cap Leakage (cc/min)	
METHANE	CH4 - Methane		CO2-COMB	Combined Carbon Dioxide for HD 2b/3 Vehicles Only	
Certification Region					
CA	California + CAA Section 177 states		FA	Federal	
Exhaust Emission Standard Level					
B1	Federal Tier 2 Bin 1		L3ULEV340	California LEV-III ULEV340	
B2	Federal Tier 2 Bin 2		L3ULEV250	California LEV-III ULEV250	
B3	Federal Tier 2 Bin 3		L3ULEV200	California LEV-III ULEV200	
B4	Federal Tier 2 Bin 4		L3SULEV170	California LEV-III SULEV170	
B5	Federal Tier 2 Bin 5		L3SULEV150	California LEV-III SULEV150	

Certification Summary Information Report

Test Group		PCANJ.000261	Evaporative/Refueling Family		--
B6	Federal Tier 2 Bin 6		L3LEV630	California LEV-III LEV630	
B7	Federal Tier 2 Bin 7		L3ULEV570	California LEV-III ULEV570	
B8	Federal Tier 2 Bin 8		L3ULEV400	California LEV-III ULEV400	
B9	Federal Tier 2 Bin 9		L3ULEV270	California LEV-III ULEV270	
B10	Federal Tier 2 Bin 10		L3SULEV230	California LEV-III SULEV230	
B11	Federal Tier 2 Bin 11		L3SULEV200	California LEV-III SULEV200	
HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)		T3B160	Federal Tier 3 Bin 160	
HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)		T3B125	Federal Tier 3 Bin 125	
L2	California LEV-II LEV		T3B110	Federal Tier 3 Transitional Bin 110	
L2OP	California LEV-II LEV Optional		T3B85	Federal Tier 3 Transitional Bin 85	
U2	California LEV-II ULEV		T3SULEV30	Federal Tier 3 Transitional LEV-II SULEV30 Carryover	
S2	California LEV-II SULEV		T3B70	Federal Tier 3 Bin 70	
ZEV	California ZEV		T3B50	Federal Tier 3 Bin 50	
OT	Other		T3B30	Federal Tier 3 Bin 30	
T1	Federal Tier 1		T3B20	Federal Tier 3 Bin 20	
PZEV	California PZEV		T3B0	Federal Tier 3 Bin 0	
L2LEV160	California LEV-II LEV160		HDV2B395	Federal Tier 3 HD Class 2b Transitional Bin 395	
L2ULEV125	California LEV-II ULEV125		HDV2B340	Federal Tier 3 HD Class 2b Transitional Bin 340	
L2SULEV30	California LEV-II SULEV30		HDV2B250	Federal Tier 3 HD Class 2b Bin 250	
L2LEV395	California LEV-II LEV395		HDV2B200	Federal Tier 3 HD Class 2b Bin 200	
L2ULEV340	California LEV-II ULEV340		HDV2B170	Federal Tier 3 HD Class 2b Bin 170	
L2LEV630	California LEV-II LEV630		HDV2B150	Federal Tier 3 HD Class 2b Bin 150	
L2ULEV570	California LEV-II ULEV570		HDV2B0	Federal Tier 3 HD Class 2b Bin 0	
L3LEV160	California LEV-III LEV160		HDV3B630	Federal Tier 3 HD Class 3 Transitional Bin 630	
L3ULEV125	California LEV-III ULEV125		HDV3B570	Federal Tier 3 HD Class 3 Transitional Bin 570	
L3ULEV70	California LEV-III ULEV70		HDV3B400	Federal Tier 3 HD Class 3 Bin 400	
L3ULEV50	California LEV-III ULEV50		HDV3B270	Federal Tier 3 HD Class 3 Bin 270	
L3SULEV30	California LEV-III SULEV30		HDV3B230	Federal Tier 3 HD Class 3 Bin 230	
L3SULEV20	California LEV-III SULEV20		HDV3B200	Federal Tier 3 HD Class 3 Bin 200	
L3LEV395	California LEV-III LEV395		HDV3B0	Federal Tier 3 HD Class 3 Bin 0	
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				

Certification Summary Information Report

Test Group		PCANJ.000261		Evaporative/Refueling Family		--	
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		