



Application for Certification - Part 1

Test Group (CBI)

- **Model Year:** 2027
- **Manufacturer Name:** Hyundai Motor Company
- **Test Group:** VHXYV00.0W00
- **Test Group Description:** Battery Electric Vehicle
- **Durability Group:** VHXYEEENNW00
- **Durability Group Description:** N/A
- **Vehicle Class:** LDV
- **Applicable Standards:** FED: Tier-4 Bin 0
CAL: ACC-2 ZEV
- **Vehicles Tested:** FEDV: NE1-AU5ESER116A/0,
NE1-AU5ESER117A/0,
NE1XAU5ESER307A/0
- **Carlines Covered by Certificate:** Ioniq 5 AWD (19 inch Wheels)
Ioniq 5 AWD (20 inch Wheels)
Ioniq 5 AWD XRT
- **EPA Response Requested by:** April 30, 2026
- **For Questions, Contact:** Stephanie Wright
734-273-1904
E-mail: swright@hatci.com

TABLE OF CONTENTS

Section	Contents	Application	
		Common	Test Group
01	Correspondence and Communications	x	
02	Durability Group Description		x
	02.01 List of Vehicles in Durability Groups	x	
	02.02 Catalyst Information		x
03	Evaporative/Refueling Family Description		x
	03.01 Evaporative/Refueling General Description	x	
	03.02 List of Vehicles in Evaporative Families	x	
04	Durability Test Procedure Description		
	04.01 Exhaust Durability Vehicle Test Data		x
	04.02 Evaporative/ORVR Durability Test Data		x
	04.03 Exhaust Durability Test Procedure	x	
	04.04 Evaporative Durability Test Procedure	x	
05	Test Group Description		x
06	Test Vehicle Description		x
07	Test Results		x
08	Emission Compliance Statement	x	
09	OBD System Description		x
	09.01 CARB Approval Letter		x
10	Description of Alternate-Fueled Vehicles		x
11	AECD Descriptions		x
12	Description of Vehicles Covered by Certificate and Test Parameters		
	12.01 Vehicle Parameters		x
	12.02 Test Parameters	x	x
13	Projected Sales	x	
14	Request for Certification		x
15	Other Information		
	15.01 Certification Fee Filing Form		x
	15.02 Vehicle Emission Control Information Label		x
	15.03 ORVR Safety Statement		x
	15.04 New Technology System Description	x	
	15.05 Engine oil Information	x	
16	California ARB Information	x	x
17	Service of Process	x	
18	Attachment		x

01.00 Correspondence and Communications

Please refer to Common Section 01.00.

For questions, call Stephanie Wright (734-273-1904).

02.00 Durability Group Description

- | | |
|--|--|
| 1. Durability Group Name | : VHYXEEENNW00 |
| 2. Engine Type | : Motor |
| 3. Fuel Used | : Electricity |
| 4. Battery Capacity(s) | : 120.6 Ah |
| 5. Battery Chemistry(s) | : NCM*1 |
| 6. Battery Duty Cycle Usage(s) | : 10 years / 200,000 miles |
| 7. Battery Manufacturer | : Hyundai Mobis (SK ON / LG ES) |
| 8. Battery Construction | : 32 modules (12 cells each, 384 cells in total) |
| 9. Battery Self-Discharge Information | : <5.0% @SOC65%, RT for 6 months |
| 10. Description of the Thermal Management System | : Indirect liquid cooling |
| 11. Battery Disposal Plan | : See Common Section 02.00 |

(Note) *1 : Nickel Cobalt Manganese

02.01 List of Vehicles in Durability Groups

Please refer to Common Section 02.01.

02.02 Catalyst Information : Not Applicable

03.00 Evaporative/Refueling Family Description: Not Applicable

04.00 Durability Procedure Description: Not Applicable

05.00 Test Group Description

Test Group Name : VHYXV00.0W00

Vehicle Class(s) Covered : FED - LDV
CAL - PC

Sales Location/Emission Standard : FED - Tier-4 Bin 0 / Not Applicable
CAL – ACC-2 ZEV / Not Applicable
See CSI report for emission standard levels

06.00 Test Vehicle Description

Durability Data Vehicle: Not Applicable

Emission Data Vehicle: Please refer to CSI report in 07.00

07.00 Test Results

07.01 EV-CIS Certification Summary Information

Certification Summary Information Report submitted to EV-CIS.

See 18.00.00.

08.00 Emission Compliance Statement: Not Applicable

09.00 OBD System Description

Battery electric vehicles are exempt from OBD requirements because they do not use emission control systems and/or components.

10.00 Description of Alternate-Fueled Vehicles: Not Applicable

11.00 AECD Description: Not Applicable

VHYXV00.0W00 - Ioniq 5 AWD – Part 1
Issued : 03-31-2026
Revised:

12.00 Description of Vehicles Covered by Certificate and Test Parameters

12.01 Vehicle Parameters

Carline		98	99	100
Model Name		Ioniq 5 AWD XRT	Ioniq 5 AWD (19inch Wheels)	Ioniq 5 AWD (20inch Wheels)
Vehicle Classification		LDV	LDV	LDV
Emission Control System Description		N/A	N/A	N/A
Engine Code (Motor)		EM07	EM07	EM07
Number of Valves per Cylinder		N/A	N/A	N/A
Engine Displacement (L)		N/A	N/A	N/A
Sales Area		50-State	50-State	50-State
Transmission and Overdrive		Fixed Single Speed	Fixed Single Speed	Fixed Single Speed
SIL		N/A	N/A	N/A
Tire Size		235/60R18 (Continental)	235/55R19 (Michelin)	255/45R20 (Michelin)
N/V Ratios		127.3	126.6	127.0
ETW(lb)		5000	5000	5000
Elec. Dyno. Target Coefficient	A	Please refer to 12.02.01.	Please refer to 12.02.01.	Please refer to 12.02.01.
	B			
	C			
Motor	Type	PMSM*1	PMSM*1	PMSM*1
	Max. Power (kW)	73.9 / 165.4	73.9 / 165.4	73.9 / 165.4
Battery	Type	Lithium ion	Lithium ion	Lithium ion
	Rated Voltage (V)	697	697	697
	Weight (kg)	478.9	478.9	478.9

(Note) *1 : Permanent Magnet Synchronous Motor

VHYXV00.0W00 - Ioniq 5 AWD – Part 1
 Issued : 03-31-2026
 Revised:

(Canada Only Vehicles)

Carline		99	100
Model Name		Ioniq 5 AWD (19inch Wheels)	Ioniq 5 AWD (20inch Wheels)
Vehicle Classification		LDV	LDV
Emission Control System Description		N/A	N/A
Engine Code (Motor)		EM07	EM07
Number of Valves per Cylinder		N/A	N/A
Engine Displacement (L)		N/A	N/A
Sales Area		Canada	Canada
Transmission and Overdrive		Fixed Single Speed	Fixed Single Speed
SIL		N/A	N/A
Tire Size		235/55R19 (Michelin)	255/45R20 (Michelin)
N/V Ratios		126.6	127.0
ETW(lb)		5000	5000
Elec. Dyno. Target Coefficient	A	Please refer to 12.02.01.	Please refer to 12.02.01.
	B		
	C		
Motor	Type	PMSM	PMSM
	Max. Power (kW)	73.9 / 165.4	73.9 / 165.4
Battery	Type	Lithium ion	Lithium ion
	Rated Voltage (V)	697	697
	Weight (kg)	478.4	478.4

VHYXV00.0W00 - Ioniq 5 AWD – Part 1
 Issued : 03-31-2026
 Revised:

12.02.02 Engine Starting Procedures

Please refer to Common Section 12.02.02.

12.02.03 Shift Schedules: Not Applicable

12.02.04 Transmission / Advanced Technology System Test Modes

Please refer to Common Section 12.02.04.

12.02.05 Running Loss Fuel Tank Temperature Profile: Not Applicable

13.00 Projected Sales

Please refer to Common Section 13.00.

14.00 Request for Certification



Ms. Kathryn Kochunas
Certification Division
Mobile Source Pollution Control
U.S. Environmental Protection Agency
2000 Traverwood Drive
Ann Arbor, Michigan

Subject: Request for Certificate of Conformity for 2027 Model Year Test Group
VHYXV00.0W00 / Evaporative Family N/A

Dear Ms. Kathryn Kochunas:

Hyundai Motor Company requests that EPA issue a Certificate of Conformity for the test group subjected above.

All vehicles within the test group mentioned above comply with the applicable regulations contained in 40 CFR 86.1844-01(d)(14) including the provisions of 40 CFR Parts 85, 86 and 600. This test group also complies with California Air Resources Board, Final Regulation Order, Sections 1961.4 and 1961.3 (1962.4 and 1962.3 for zero-emission vehicles) Title 13, California Code of Regulations.

The Part 1 Application for Certification has been prepared in accordance with the standardized format recommended by EPA via its guidance document CD-14-19 (LDV/LDT/OCO/LIMO) Subject: Certification Application Reporting Guidance, dated November 24, 2014.

If you have any questions regarding the Certificate of Conformity, do not hesitate to contact Stephanie Wright at swright@hatci.com or (734) 273-1904.
Sincerely,

A handwritten signature in black ink, appearing to read 'Ji H. Ji', written over a horizontal line.

C. H. Ji
General Manager
Regulation & Certification Team2
Hyundai Motor Company

VHYXV00.0W00 - Ioniq 5 AWD – Part 1
Issued : 03-31-2026
Revised:



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

Subject: Request for Executive Order for 2027 Model Year Test Group VHYXV00.0W00 /
Evaporative Family N/A

Dear Ms. Robin U. Lang:

Hyundai Motor Company requests that California Air Resources Board (CARB) issue an Executive Order for the test group subjected above.

All vehicles within the test group mentioned above comply with the applicable regulations contained in 40 CFR 86.1844-01(d)(14) including the provisions of 40 CFR Parts 85, 86 and 600. This test group also complies with California Air Resources Board, Final Regulation Order, Sections 1961.4 and 1961.3 (1962.4 and 1962.3 for zero-emission vehicles) Title 13, California Code of Regulations.

The Part 1 Application for Certification has been prepared in accordance with the standardized format recommended by EPA via its guidance document CD-14-19 (LDV/LDT/OCO/LIMO) Subject: Certification Application Reporting Guidance, dated November 24, 2014.

If you have any questions regarding the Executive Order, do not hesitate to contact Stephanie Wright at swright@haci.com or (734) 273-1904.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. H. Ji', written over a horizontal line.

C. H. Ji
General Manager
Regulation & Certification Team2
Hyundai Motor Company

VHYXV00.0W00 - Ioniq 5 AWD – Part 1
Issued : 03-31-2026
Revised:

15.00 Other Information

15.01 Certification Fee Filing Form

VHYXV00.0W00 - Ioniq 5 AWD – Part 1

Issued : 03-31-2026

Revised:

US EPA Fee Form

[Help and EPA Instructions](#)

* Required Field

General Information

Date: 03/03/2026

Process Code *

Submit New Fee Filing Form

Manufacturer Code *

HYX

Manufacturer Name *

Hyundai

Contact Name *

Jennifer Cherry

Contact Email Address *

jcherry@hatci.com

Contact Phone *

7343372259

Calendar Year complete application submitted
to EPA *

2026

PLEASE NOTE: These fees apply to complete certification applications received by EPA from January 1, 2026, through December 31, 2026. The applicable fee is determined by the

calendar year in which the complete certification application is received, not the model year.

Engine Family / Evaporative Family / Test Group *

VHYXV00.0W00

Certificate Request Type (Industry Sector Code)

Certificate Request Type *

- ☒ On-Highway LDV, LTD, MDVPV, HDV Chassis Cert (Federal) (A, B, D, J, T, V)
- ☐ On-Highway HDE Dyno Cert (Federal) (E, H)
- ☐ On-Highway LD ICI, MDPV ICI, HDV ICI (A, B, D, J, T, V)
- ☐ On-Highway Motorcycle (C)
- ☐ On-Highway HDV Evap (F)
- ☐ On-Highway LDV, LTD, MDVPV, HDV Chassis Cert (California-Only) (A, B, D, J, T, V)
- ☐ On-Highway HDE Dyno Cert (California-Only) (E, H)
- ☐ Nonroad CI (L)
- ☐ Nonroad SI (B, S)
- ☐ Locomotive (G, K)
- ☐ All Nonroad Recreational, excluding Marine engines (X, Y)
- ☐ All Marine (Including IMO) (M, N, W)
- ☐ Component Certification for Evaporative Emissions (P)

IMO Name (Required for dual US/IMO Marine Only)

ICI VIN Number (Required for ICIs Only)

Do you qualify for a Reduced Fee? *

No

Payment Information

Amount Owed

\$32,317.00

Payment Type *

Offline Wire

Comments

EPA Form Number 3520-29

OMB Control No.2060-0545

Approval expires 7/31/2027

The public reporting and recordkeeping burden for this collection of information is estimated to average 12 minutes per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.

The content of this document may contain Sensitive But Unclassified (SBU) data and/or Controlled Unclassified Information (CUI).

15.02 Vehicle Emission Control Information (VECI) Label

		
HYUNDAI MOTOR COMPANY VEHICLE EMISSION CONTROL INFORMATION		
Conforms to regulations: 2027 MY		
U.S.EPA: T4B0 LDV	OBD: N/A	Fuel: Electricity
California: ZEV PC	OBD: N/A	Fuel: Electricity
No adjustments needed. This vehicle is certified to operate on electricity.		
Group: VHYXV00.0W00 Evap.: N/A		32410-1XAN0

15.03 ORVR Safety Statement: Not Applicable

15.04 New Technology System Description

Please refer to Common Section 15.04

15.05 Engine oil information: Not Applicable

16.00 California ARB Information

16.01 Exhaust Emission Control System (Tune-up label)

Test Group Name	Model	Exhaust Emission Control System
VHYXV00.0W00	Ioniq 5 AWD XRT	N/A
VHYXV00.0W00	Ioniq 5 AWD (19inch Wheels)	N/A
VHYXV00.0W00	Ioniq 5 AWD (20inch Wheels)	N/A

16.02 Test Procedures

Please refer to Common section 16.02.03

16.03.00 Fill Pipe Access Zones Statement and Specifications: Not Applicable

VHYXV00.0W00 - Ioniq 5 AWD – Part 1

Issued : 03-31-2026

Revised:

16.04.00 Request for Certificate

Please refer to 14.00.

16.04.01 Statement of Compliance

Please refer to Common Section 16.04.01.

16.04.02 Supplemental Data Sheet

Please refer to E-cert data.

16.05.00 Emission Testing Waiver Statement

Not applicable.

16.06.00 Projected Sales

Please refer to Common Section 13.00.

16.07.00 OBD-II System Description

Not applicable.

16.08.00 New Technology System Description

Please refer to Common Section 15.04.

16.09.00 Environmental Performance Label

Pursuant to CALIFORNIA ENVIRONMENTAL PERFORMANCE LABEL SPECIFICATIONS FOR 2009 AND SUBSEQUENT MODEL YEAR PASSENGER CARS, LIGHT-DUTY TRUCKS, AND MEDIUM-DUTY PASSENGER VEHICLES (adopted May 2, 2008, last amended September 2, 2015), 2012, Hyundai complies to the Environmental Performance Label requirement by affixing the Federal Fuel Economy and Environment Label in accordance to 40 CFR Parts 85, 86, and 600 as promulgated on July 6, 2011.

16.10.00 AECD general statements

Not applicable.

16.11.00 California warranty compliance

Please refer to Common Section 16.11.00.

17.00.00 Service of Process

Please refer to Common Section 01.00.

18.00.00 Attachment

1. CSI Report

Certification Summary Information Report

Manufacturer	Hyundai Motor Company	Manufacturer Code	HYX
Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--
Certificate Number	--	CARB Executive Order #	--
Certificate Issue Date	--	Certificate Revision Date	--
Certificate Effective Date	--	Conditional Certificate	--
CSI Revision #	--	CSI Submission/Revision Date	03/31/2026 02:48:21 AM
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: 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	No	EPA Vehicle Class	LDV
Federal Clean Fuel Vehicle	No	Federal Clean Fuel Vehicle Standard	--
Federal Clean Fuel Vehicle ILEV	--	California Partial Zero Emissions Vehicle Indicator	No
Durability Group Name	VHYXEEENNW00	Durability Group Equivalency Factor	1.0
Reduced Fee Test Group	No	Certification Region Code(s)	FA, CA
Complies with HD GHG 2b/3 regulations?	No		
Introduction into Commerce Date	--	CAP2000 Conditional Certificate?	N/A
Independent Commercial Importer?	--	Alternative Fuel Converter Certificate?	--
SFTP Federal Composite Compliance Identifier	Not Applicable	SFTP Tier 2 Composite CO Option	No
SFTP LEV-III Composite Compliance Indicator	No		
OBD Compliance Type	CARB	OBD Demonstration Vehicle Test Group	VHYXV00.0W00
Test Group OBD Compliance Level	Full - no deficiencies	Number of Test Group OBD Deficiencies	0
OBD Deficiencies Comments	Battery Electric Vehicle is exempted from OBD compliance.		
Mfr Test Group Comments	--		
Mfr Exhaust / Evap Standards Comments	--		

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--		
-------------------	--------------	-------------------------------------	----	--	--

Models Covered by this Certificate

Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - Type	- # of Gears	Trans - Lockup
Hyundai Motor Company	1 - HYUNDAI MOTOR COMPANY	99 - Ioniq 5 AWD (19inch Wheels)	Federal	All Wheel Drive	Automatic	1	No
Hyundai Motor Company	1 - HYUNDAI MOTOR COMPANY	98 - Ioniq 5 AWD XRT	Federal	All Wheel Drive	Automatic	1	No
Hyundai Motor Company	1 - HYUNDAI MOTOR COMPANY	99 - Ioniq 5 AWD (19inch Wheels)	California + CAA Section 177 states	All Wheel Drive	Automatic	1	No
Hyundai Motor Company	1 - HYUNDAI MOTOR COMPANY	100 - Ioniq 5 AWD (20inch Wheels)	California + CAA Section 177 states	All Wheel Drive	Automatic	1	No
Hyundai Motor Company	1 - HYUNDAI MOTOR COMPANY	98 - Ioniq 5 AWD XRT	California + CAA Section 177 states	All Wheel Drive	Automatic	1	No
Hyundai Motor Company	1 - HYUNDAI MOTOR COMPANY	100 - Ioniq 5 AWD (20inch Wheels)	Federal	All Wheel Drive	Automatic	1	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	EPA City Litmus Threshold	EPA Highway Litmus Value	EPA Highway Litmus Threshold	CREE Weighting Factor
Electricity		--	--	--	--	--	--	--	--	--	--

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--
Hybrid Electric Vehicle And Fuel Cell Information			
Rechargeable Energy Storage System	Battery(s)	Rechargeable Energy Storage System, if Other	--
Battery Type	Lithium Ion	Number of Battery Packs	1
Total Voltage of Battery Packs	697	Battery Energy Capacity	120.6
Battery Specific Energy	176.4	Battery Charger Type	Both
Number of Capacitors	--	Capacitor Rating (In Farads)	--
Mfr Capacitor Comments	--		
Hydraulic System Description	--		
Regenerative Braking Type	Electrical Regen Brake		
Regenerative Braking Source	Both	Driver Controlled Regenerative Braking	Yes
Mfr Regenerative Braking Description	--		
Drive Motor(s)/Generator(s)	2		
Motor/Generator Type 1	PMSM	Rated Motor/Generator Power	165
Motor/Generator Type 2	PMSM	Rated Motor/Generator Power	74
Mfr Fuel Cell Description	--		
Fuel Cell On-Board H2 Storage Capacity (kg)	--	Usable H2 Fill Capacity (kg)	--
Mfr Hybrid Electric/ Electric Vehicle Comments	PMSM : Permanent Magnet Synchronous Motor		

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--						
Emission Data Vehicle Information									
Vehicle ID / Configuration	NE-U568EA011A / 0	Manufacturer Vehicle Configuration Number	0						
Original Test Group Name	SHYXV00.0W00	Original Evaporative/Refueling Family	--						
Original Test Vehicle Model Year	2025								
Vehicle Model									
Represented Test Vehicle Make	Hyundai	Represented Test Vehicle Model	Ioniq 5						
Leak Family Details									
Leak Family Identifier	--	Leak Family Name	--						
Drive Sources and Fuel System Details									
	<table><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 Storage	--	Multiple Fuel Combustion	--						
Fuel Cell Indicator	No	Rechargeable Energy Storage System Indicator	Yes						
Rechargeable Energy Storage System	Battery(s)	Rechargeable Energy Storage System, if 'Other'	--						
Off-board charge Capable Indicator	Yes								
Odometer Correction -- Initial	0	Odometer Correction Factor	1.0007						
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor								
Odometer Correction Units	Miles								
Engine Code	EM07	Rated Horsepower	321						
Displacement (liters)	0.001								
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	All Wheel Drive						
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)						
Curb Weight (lbs)	4657	Equivalent Test Weight (pounds)	5000						
GVWR (lbs)	5831	N/V Ratio	126.6						
Axle Ratio	4.71								
Transmission Type	Automatic	# of Transmission Gears	1						
Transmission Lockup	No	Creeper Gear	No						
Dynamometer Coefficients:									
	Target Coefficients		Set Coefficients						
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients		
City/Highway/Evap	30.437	0.12091	0.023022	-4.14	-0.02523	0.022634	12.5		
Emission Control Device Comments									
This vehicle has two motors (front : 99, rear : 222hp)									

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--
Manufacturer Test Vehicle Comments	25MY NE PE AWD 2 motor/Long range 19in		

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--
Test #	SHYX10087711	Test Procedure	77 - Multi-Cycle Test (MCT)
Exhaust Test # for this Evap Test	--	Test Fuel Type	62 - Electricity
Test Date	04/18/2024	Fuel	Electricity
Fuel Batch ID	--	Fuel Calibration Number	--
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	2274	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
PHEV/EV Charge Depleting Test Information			
Recharge Event Voltage	240	Recharge Event Energy (kiloWatt-hours)	92.2562
Charge Depleting Range (Calculated miles)	447.869	Charge Depleting Range (Actual miles)	447.869
Charge Depleting Range Highway (Calculated miles)	367.773	Derived 5-Cycle Coefficient Model Year	--
All Electric Range Unadjusted (miles)	--	Equivalent All Electric Range (miles)	447.869
Number of Charge Depleting Bags/Phases Conducted	8	Transition Bag/Phase Number	--
Charge Depleting Bag/Phase #1			
Test Result/Emission Name		Unrounded Test Result	
Actual Distance Driven (miles)		7.469	
Carbon-Related Exhaust Emissions		0	
Drive Trace Absolute Speed Change Rating		-1.38	
Drive Trace Energy Economy Rating		-1.82	
Drive Trace Inertia Work Ratio Rating		-1.73	
Integrated DC KW-HRS		1.49477	
Manufacturer Fuel Economy		20.012987	
Charge Depleting Bag/Phase #2			

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--
		Test Result/Emission Name	Unrounded Test Result
		Actual Distance Driven (miles)	10.256
		Carbon-Related Exhaust Emissions	0
		Drive Trace Absolute Speed Change Rating	-0.05
		Drive Trace Energy Economy Rating	-0.43
		Drive Trace Inertia Work Ratio Rating	0.09
		Integrated DC KW-HRS	2.36493
		Manufacturer Fuel Economy	23.0589899
Charge Depleting Bag/Phase #3			
		Test Result/Emission Name	Unrounded Test Result
		Actual Distance Driven (miles)	7.474
		Carbon-Related Exhaust Emissions	0
		Drive Trace Absolute Speed Change Rating	-1.82
		Drive Trace Energy Economy Rating	-1.79
		Drive Trace Inertia Work Ratio Rating	-1.82
		Integrated DC KW-HRS	1.39317
		Manufacturer Fuel Economy	18.6402194
Charge Depleting Bag/Phase #4			
		Test Result/Emission Name	Unrounded Test Result
		Actual Distance Driven (miles)	221.549
		Carbon-Related Exhaust Emissions	0
		Drive Trace Absolute Speed Change Rating	99.99
		Drive Trace Energy Economy Rating	0.01
		Drive Trace Inertia Work Ratio Rating	99.99
		Integrated DC KW-HRS	64.930887
		Manufacturer Fuel Economy	29.3076868
Charge Depleting Bag/Phase #5			
		Test Result/Emission Name	Unrounded Test Result
		Actual Distance Driven (miles)	7.476
		Carbon-Related Exhaust Emissions	0
		Drive Trace Absolute Speed Change Rating	-1.41
		Drive Trace Energy Economy Rating	-1.46
		Drive Trace Inertia Work Ratio Rating	-1.25
		Integrated DC KW-HRS	1.373533
		Manufacturer Fuel Economy	18.3725655
Charge Depleting Bag/Phase #6			

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--																
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>10.256</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>4.46</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>0.32</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>5.59</td></tr><tr><td>Integrated DC KW-HRS</td><td>2.271773</td></tr><tr><td>Manufacturer Fuel Economy</td><td>22.1506728</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	10.256	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	4.46	Drive Trace Energy Economy Rating	0.32	Drive Trace Inertia Work Ratio Rating	5.59	Integrated DC KW-HRS	2.271773	Manufacturer Fuel Economy	22.1506728		
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	10.256																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	4.46																		
Drive Trace Energy Economy Rating	0.32																		
Drive Trace Inertia Work Ratio Rating	5.59																		
Integrated DC KW-HRS	2.271773																		
Manufacturer Fuel Economy	22.1506728																		
Charge Depleting Bag/Phase #7																			
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>7.476</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>-0.74</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-1.26</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>-0.25</td></tr><tr><td>Integrated DC KW-HRS</td><td>1.390104</td></tr><tr><td>Manufacturer Fuel Economy</td><td>18.5942215</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	7.476	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	-0.74	Drive Trace Energy Economy Rating	-1.26	Drive Trace Inertia Work Ratio Rating	-0.25	Integrated DC KW-HRS	1.390104	Manufacturer Fuel Economy	18.5942215		
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	7.476																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	-0.74																		
Drive Trace Energy Economy Rating	-1.26																		
Drive Trace Inertia Work Ratio Rating	-0.25																		
Integrated DC KW-HRS	1.390104																		
Manufacturer Fuel Economy	18.5942215																		
Charge Depleting Bag/Phase #8																			
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>26.725</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>19.18</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.05</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>38.35</td></tr><tr><td>Integrated DC KW-HRS</td><td>7.915221</td></tr><tr><td>Manufacturer Fuel Economy</td><td>29.6171909</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	26.725	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	19.18	Drive Trace Energy Economy Rating	-0.05	Drive Trace Inertia Work Ratio Rating	38.35	Integrated DC KW-HRS	7.915221	Manufacturer Fuel Economy	29.6171909		
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	26.725																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	19.18																		
Drive Trace Energy Economy Rating	-0.05																		
Drive Trace Inertia Work Ratio Rating	38.35																		
Integrated DC KW-HRS	7.915221																		
Manufacturer Fuel Economy	29.6171909																		
Manufacturer Test Comments	25MY NE PE EV long range AWD 19in MCT Phase4(CSC) ASCR : 112.97 / IWR : 225.99																		

Certification Summary Information Report

Test Group		VHYXV00.0W00				Evaporative/Refueling Family				--		
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 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--
------------	--------------	------------------------------	----

Emission Data Vehicle Information

Vehicle ID / Configuration	NE-U568EA011A / 1	Manufacturer Vehicle Configuration Number	0
Original Test Group Name	SHYXV00.0W00	Original Evaporative/Refueling Family	--
Original Test Vehicle Model Year	2025		

Vehicle Model

Represented Test Vehicle Make	Hyundai	Represented Test Vehicle Model	Ioniq 5
-------------------------------	---------	--------------------------------	---------

Leak Family Details

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

Drive Sources and Fuel System Details

Drive Source and Fuel#	Drive Source	Fuel
1	Electric Motor	Electricity

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	0	Odometer Correction Factor	1.0007
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Miles		
Engine Code	EM07	Rated Horsepower	321
Displacement (liters)	0.001		
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	All Wheel Drive
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)
Curb Weight (lbs)	4806	Equivalent Test Weight (pounds)	5000
GVWR (lbs)	5831	N/V Ratio	127
Axle Ratio	4.71		
Transmission Type	Automatic	# of Transmission Gears	1
Transmission Lockup	No	Creeper Gear	No

Dynamometer Coefficients:

Target Coefficients				Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	
City/Highway/Evap	32.636	0.28621	0.021653	-4.681	0.09419	0.021761	13.5

Emission Control Device Comments

This vehicle has two motors (front : 99, rear : 222hp)

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--
Manufacturer Test Vehicle Comments	25MY NE PE AWD 2 motor/Long range 20in		

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--																
Test #	SHYX10087712	Test Procedure	77 - Multi-Cycle Test (MCT)																
Exhaust Test # for this Evap Test	--	Test Fuel Type	62 - Electricity																
Test Date	08/24/2024	Fuel	Electricity																
Fuel Batch ID	--	Fuel Calibration Number	--																
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined																
Verify Test Lab ID	772-1, Jangduck-Dong																		
E10 Evaporative Test Measurement Method	--																		
Test Start Odometer Reading	4451	Odometer Units	M																
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--																
State of Charge Delta	Yes																		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes																
PHEV/EV Charge Depleting Test Information																			
Recharge Event Voltage	240	Recharge Event Energy (kiloWatt-hours)	90.8357																
Charge Depleting Range (Calculated miles)	408.886	Charge Depleting Range (Actual miles)	408.886																
Charge Depleting Range Highway (Calculated miles)	339.292	Derived 5-Cycle Coefficient Model Year	--																
All Electric Range Unadjusted (miles)	--	Equivalent All Electric Range (miles)	408.886																
Number of Charge Depleting Bags/Phases Conducted	8	Transition Bag/Phase Number	--																
Charge Depleting Bag/Phase #1																			
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>7.468</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>-0.35</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.84</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>0.12</td></tr><tr><td>Integrated DC KW-HRS</td><td>1.57322</td></tr><tr><td>Manufacturer Fuel Economy</td><td>21.0661489</td></tr></table>				Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	7.468	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	-0.35	Drive Trace Energy Economy Rating	-0.84	Drive Trace Inertia Work Ratio Rating	0.12	Integrated DC KW-HRS	1.57322	Manufacturer Fuel Economy	21.0661489
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	7.468																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	-0.35																		
Drive Trace Energy Economy Rating	-0.84																		
Drive Trace Inertia Work Ratio Rating	0.12																		
Integrated DC KW-HRS	1.57322																		
Manufacturer Fuel Economy	21.0661489																		
Charge Depleting Bag/Phase #2																			

Charge Depleting Bag/Phase #3

Charge Depleting Bag/Phase #4

Charge Depleting Bag/Phase #5

Charge Depleting Bag/Phase #6

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--																
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>10.256</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>4.26</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>0.43</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>5.34</td></tr><tr><td>Integrated DC KW-HRS</td><td>2.435391</td></tr><tr><td>Manufacturer Fuel Economy</td><td>23.7640121</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	10.256	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	4.26	Drive Trace Energy Economy Rating	0.43	Drive Trace Inertia Work Ratio Rating	5.34	Integrated DC KW-HRS	2.435391	Manufacturer Fuel Economy	23.7640121		
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	10.256																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	4.26																		
Drive Trace Energy Economy Rating	0.43																		
Drive Trace Inertia Work Ratio Rating	5.34																		
Integrated DC KW-HRS	2.435391																		
Manufacturer Fuel Economy	23.7640121																		
Charge Depleting Bag/Phase #7																			
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>7.47</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>-0.24</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.64</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>0.16</td></tr><tr><td>Integrated DC KW-HRS</td><td>1.48356</td></tr><tr><td>Manufacturer Fuel Economy</td><td>19.860241</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	7.47	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	-0.24	Drive Trace Energy Economy Rating	-0.64	Drive Trace Inertia Work Ratio Rating	0.16	Integrated DC KW-HRS	1.48356	Manufacturer Fuel Economy	19.860241		
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	7.47																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	-0.24																		
Drive Trace Energy Economy Rating	-0.64																		
Drive Trace Inertia Work Ratio Rating	0.16																		
Integrated DC KW-HRS	1.48356																		
Manufacturer Fuel Economy	19.860241																		
Charge Depleting Bag/Phase #8																			
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>21.065</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>17.18</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-1.33</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>34.35</td></tr><tr><td>Integrated DC KW-HRS</td><td>6.569082</td></tr><tr><td>Manufacturer Fuel Economy</td><td>31.1848184</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	21.065	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	17.18	Drive Trace Energy Economy Rating	-1.33	Drive Trace Inertia Work Ratio Rating	34.35	Integrated DC KW-HRS	6.569082	Manufacturer Fuel Economy	31.1848184		
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	21.065																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	17.18																		
Drive Trace Energy Economy Rating	-1.33																		
Drive Trace Inertia Work Ratio Rating	34.35																		
Integrated DC KW-HRS	6.569082																		
Manufacturer Fuel Economy	31.1848184																		
Manufacturer Test Comments	25MY NE PE EV long range AWD 20in MCT Phase4(CSC) ASCR : 198.79 / IWR : 397.56																		

Certification Summary Information Report

Test Group		VHYXV00.0W00			Evaporative/Refueling Family				--			
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 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--						
Emission Data Vehicle Information									
Vehicle ID / Configuration	NE1-AU5ESER116A / 0	Manufacturer Vehicle Configuration Number	0						
Original Test Group Name	SHYXV00.0W00	Original Evaporative/Refueling Family	--						
Original Test Vehicle Model Year	2025								
Vehicle Model									
Represented Test Vehicle Make	Hyundai	Represented Test Vehicle Model	Ioniq 5						
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 Storage	--	Multiple Fuel Combustion	--						
Fuel Cell Indicator	No	Rechargeable Energy Storage System Indicator	Yes						
Rechargeable Energy Storage System	Battery(s)	Rechargeable Energy Storage System, if 'Other'	--						
Off-board charge Capable Indicator	Yes								
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	EM07	Rated Horsepower	321						
Displacement (liters)	0.001								
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	All Wheel Drive						
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)						
Curb Weight (lbs)	4657	Equivalent Test Weight (pounds)	5000						
GVWR (lbs)	5831	N/V Ratio	126.6						
Axle Ratio	4.71								
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)						
City/Highway/Evap	30.437	0.12091	0.023022						
		A (lbf)	B (lbf/mph)						
		-2.477	-0.04339						
			C (lbf/mph**2)						
			0.022776						
			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients						
			12.5						
Emission Control Device Comments									
This vehicle has two motors (front : 99, rear : 222hp)									

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--
Manufacturer Test Vehicle Comments	25MY NE AWD 2 motor/Long range 19in		

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--
Test #	SHYX10086733	Test Procedure	77 - Multi-Cycle Test (MCT)
Exhaust Test # for this Evap Test	--	Test Fuel Type	62 - Electricity
Test Date	05/16/2024	Fuel	Electricity
Fuel Batch ID	--	Fuel Calibration Number	--
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	2254	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
PHEV/EV Charge Depleting Test Information			
Recharge Event Voltage	240	Recharge Event Energy (kiloWatt-hours)	93.0259
Charge Depleting Range (Calculated miles)	458.38	Charge Depleting Range (Actual miles)	458.38
Charge Depleting Range Highway (Calculated miles)	380.3	Derived 5-Cycle Coefficient Model Year	--
All Electric Range Unadjusted (miles)	--	Equivalent All Electric Range (miles)	458.38
Number of Charge Depleting Bags/Phases Conducted	8	Transition Bag/Phase Number	--
Charge Depleting Bag/Phase #1			
Test Result/Emission Name		Unrounded Test Result	
Actual Distance Driven (miles)		7.455	
Carbon-Related Exhaust Emissions		0	
Drive Trace Absolute Speed Change Rating		-0.12	
Drive Trace Energy Economy Rating		-0.3	
Drive Trace Inertia Work Ratio Rating		0.09	
Integrated DC KW-HRS		1.497	
Manufacturer Fuel Economy		20.084	
Charge Depleting Bag/Phase #2			

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--																
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>10.255</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>3.68</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.04</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>4.77</td></tr><tr><td>Integrated DC KW-HRS</td><td>2.299</td></tr><tr><td>Manufacturer Fuel Economy</td><td>22.421</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	10.255	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	3.68	Drive Trace Energy Economy Rating	-0.04	Drive Trace Inertia Work Ratio Rating	4.77	Integrated DC KW-HRS	2.299	Manufacturer Fuel Economy	22.421		
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	10.255																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	3.68																		
Drive Trace Energy Economy Rating	-0.04																		
Drive Trace Inertia Work Ratio Rating	4.77																		
Integrated DC KW-HRS	2.299																		
Manufacturer Fuel Economy	22.421																		
Charge Depleting Bag/Phase #3																			
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>7.452</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>0.18</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.32</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>0.05</td></tr><tr><td>Integrated DC KW-HRS</td><td>1.395</td></tr><tr><td>Manufacturer Fuel Economy</td><td>18.725</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	7.452	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	0.18	Drive Trace Energy Economy Rating	-0.32	Drive Trace Inertia Work Ratio Rating	0.05	Integrated DC KW-HRS	1.395	Manufacturer Fuel Economy	18.725		
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	7.452																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	0.18																		
Drive Trace Energy Economy Rating	-0.32																		
Drive Trace Inertia Work Ratio Rating	0.05																		
Integrated DC KW-HRS	1.395																		
Manufacturer Fuel Economy	18.725																		
Charge Depleting Bag/Phase #4																			
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>226.055</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>0</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.03</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>0</td></tr><tr><td>Integrated DC KW-HRS</td><td>65.409</td></tr><tr><td>Manufacturer Fuel Economy</td><td>28.935</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	226.055	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	0	Drive Trace Energy Economy Rating	-0.03	Drive Trace Inertia Work Ratio Rating	0	Integrated DC KW-HRS	65.409	Manufacturer Fuel Economy	28.935		
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	226.055																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	0																		
Drive Trace Energy Economy Rating	-0.03																		
Drive Trace Inertia Work Ratio Rating	0																		
Integrated DC KW-HRS	65.409																		
Manufacturer Fuel Economy	28.935																		
Charge Depleting Bag/Phase #5																			
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>7.452</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>0.08</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.33</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>0.46</td></tr><tr><td>Integrated DC KW-HRS</td><td>1.336</td></tr><tr><td>Manufacturer Fuel Economy</td><td>17.93</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	7.452	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	0.08	Drive Trace Energy Economy Rating	-0.33	Drive Trace Inertia Work Ratio Rating	0.46	Integrated DC KW-HRS	1.336	Manufacturer Fuel Economy	17.93		
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	7.452																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	0.08																		
Drive Trace Energy Economy Rating	-0.33																		
Drive Trace Inertia Work Ratio Rating	0.46																		
Integrated DC KW-HRS	1.336																		
Manufacturer Fuel Economy	17.93																		
Charge Depleting Bag/Phase #6																			

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--																
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>10.255</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>3.71</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.02</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>4.67</td></tr><tr><td>Integrated DC KW-HRS</td><td>2.25</td></tr><tr><td>Manufacturer Fuel Economy</td><td>21.941</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	10.255	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	3.71	Drive Trace Energy Economy Rating	-0.02	Drive Trace Inertia Work Ratio Rating	4.67	Integrated DC KW-HRS	2.25	Manufacturer Fuel Economy	21.941		
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	10.255																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	3.71																		
Drive Trace Energy Economy Rating	-0.02																		
Drive Trace Inertia Work Ratio Rating	4.67																		
Integrated DC KW-HRS	2.25																		
Manufacturer Fuel Economy	21.941																		
Charge Depleting Bag/Phase #7																			
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>7.456</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>-0.13</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.29</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>0.18</td></tr><tr><td>Integrated DC KW-HRS</td><td>1.377</td></tr><tr><td>Manufacturer Fuel Economy</td><td>18.463</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	7.456	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	-0.13	Drive Trace Energy Economy Rating	-0.29	Drive Trace Inertia Work Ratio Rating	0.18	Integrated DC KW-HRS	1.377	Manufacturer Fuel Economy	18.463		
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	7.456																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	-0.13																		
Drive Trace Energy Economy Rating	-0.29																		
Drive Trace Inertia Work Ratio Rating	0.18																		
Integrated DC KW-HRS	1.377																		
Manufacturer Fuel Economy	18.463																		
Charge Depleting Bag/Phase #8																			
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>29.951</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>27.09</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.07</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>54.17</td></tr><tr><td>Integrated DC KW-HRS</td><td>8.791</td></tr><tr><td>Manufacturer Fuel Economy</td><td>29.351</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	29.951	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	27.09	Drive Trace Energy Economy Rating	-0.07	Drive Trace Inertia Work Ratio Rating	54.17	Integrated DC KW-HRS	8.791	Manufacturer Fuel Economy	29.351		
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	29.951																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	27.09																		
Drive Trace Energy Economy Rating	-0.07																		
Drive Trace Inertia Work Ratio Rating	54.17																		
Integrated DC KW-HRS	8.791																		
Manufacturer Fuel Economy	29.351																		
Manufacturer Test Comments		25MY NEa PE EV long range AWD 19in MCT Data over '99.99' have been set as '0' due to technical restrictions, but have actually obtained the following results: -> Charge Depleting Bag / Phase #4 DT-ASCR = 187.07 DT-IWRR = 374.14																	

Certification Summary Information Report

Test Group		VHYXV00.0W00				Evaporative/Refueling Family				--		
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 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--						
Emission Data Vehicle Information									
Vehicle ID / Configuration	NE1-AU5ESER117A / 0	Manufacturer Vehicle Configuration Number	0						
Original Test Group Name	SHYXV00.0W00	Original Evaporative/Refueling Family	--						
Original Test Vehicle Model Year	2025								
Vehicle Model									
Represented Test Vehicle Make	Hyundai	Represented Test Vehicle Model	Ioniq 5						
Leak Family Details									
Leak Family Identifier	--	Leak Family Name	--						
Drive Sources and Fuel System Details									
	<table><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 Storage	--	Multiple Fuel Combustion	--						
Fuel Cell Indicator	No	Rechargeable Energy Storage System Indicator	Yes						
Rechargeable Energy Storage System	Battery(s)	Rechargeable Energy Storage System, if 'Other'	--						
Off-board charge Capable Indicator	Yes								
Odometer Correction -- Initial	0	Odometer Correction Factor	1.0007						
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor								
Odometer Correction Units	Miles								
Engine Code	EM07	Rated Horsepower	321						
Displacement (liters)	0.001								
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	All Wheel Drive						
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)						
Curb Weight (lbs)	4806	Equivalent Test Weight (pounds)	5000						
GVWR (lbs)	5831	N/V Ratio	127						
Axle Ratio	4.71								
Transmission Type	Automatic	# of Transmission Gears	1						
Transmission Lockup	No	Creeper Gear	No						
Dynamometer Coefficients:									
	Target Coefficients		Set Coefficients						
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients		
City/Highway/Evap	32.636	0.28621	0.021653	-5.674	0.14844	0.021296	13.5		
Emission Control Device Comments									
This vehicle has two motors (front : 99, rear : 222hp)									

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--
Manufacturer Test Vehicle Comments	25MY NE AWD 2 motor/Long range 20in		

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--
Test #	SHYX10086736	Test Procedure	77 - Multi-Cycle Test (MCT)
Exhaust Test # for this Evap Test	--	Test Fuel Type	62 - Electricity
Test Date	04/25/2024	Fuel	Electricity
Fuel Batch ID	--	Fuel Calibration Number	--
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	2249	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
PHEV/EV Charge Depleting Test Information			
Recharge Event Voltage	240	Recharge Event Energy (kiloWatt-hours)	92.7617
Charge Depleting Range (Calculated miles)	424.595	Charge Depleting Range (Actual miles)	424.595
Charge Depleting Range Highway (Calculated miles)	344.155	Derived 5-Cycle Coefficient Model Year	--
All Electric Range Unadjusted (miles)	--	Equivalent All Electric Range (miles)	424.595
Number of Charge Depleting Bags/Phases Conducted	8	Transition Bag/Phase Number	--
Charge Depleting Bag/Phase #1			
Test Result/Emission Name		Unrounded Test Result	
Actual Distance Driven (miles)		7.468	
Carbon-Related Exhaust Emissions		0	
Drive Trace Absolute Speed Change Rating		-0.14	
Drive Trace Energy Economy Rating		-0.44	
Drive Trace Inertia Work Ratio Rating		-0.08	
Integrated DC KW-HRS		1.59348	
Manufacturer Fuel Economy		21.3374397	
Charge Depleting Bag/Phase #2			

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--
Test Result/Emission Name		Unrounded Test Result	
Actual Distance Driven (miles)		10.256	
Carbon-Related Exhaust Emissions		0	
Drive Trace Absolute Speed Change Rating		4.21	
Drive Trace Energy Economy Rating		-0.01	
Drive Trace Inertia Work Ratio Rating		5.34	
Integrated DC KW-HRS		2.53484	
Manufacturer Fuel Economy		24.7156786	
Charge Depleting Bag/Phase #3			
Test Result/Emission Name		Unrounded Test Result	
Actual Distance Driven (miles)		7.468	
Carbon-Related Exhaust Emissions		0	
Drive Trace Absolute Speed Change Rating		-0.21	
Drive Trace Energy Economy Rating		-0.44	
Drive Trace Inertia Work Ratio Rating		-0.15	
Integrated DC KW-HRS		1.50304	
Manufacturer Fuel Economy		20.1264059	
Charge Depleting Bag/Phase #4			
Test Result/Emission Name		Unrounded Test Result	
Actual Distance Driven (miles)		209.679	
Carbon-Related Exhaust Emissions		0	
Drive Trace Absolute Speed Change Rating		0	
Drive Trace Energy Economy Rating		0.03	
Drive Trace Inertia Work Ratio Rating		0	
Integrated DC KW-HRS		65.074587	
Manufacturer Fuel Economy		31.0353383	
Charge Depleting Bag/Phase #5			
Test Result/Emission Name		Unrounded Test Result	
Actual Distance Driven (miles)		7.468	
Carbon-Related Exhaust Emissions		0	
Drive Trace Absolute Speed Change Rating		-0.25	
Drive Trace Energy Economy Rating		-0.45	
Drive Trace Inertia Work Ratio Rating		-0.25	
Integrated DC KW-HRS		1.433393	
Manufacturer Fuel Economy		19.1938002	
Charge Depleting Bag/Phase #6			

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--																
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>10.256</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>4.44</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>0</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>5.58</td></tr><tr><td>Integrated DC KW-HRS</td><td>2.443632</td></tr><tr><td>Manufacturer Fuel Economy</td><td>23.8263651</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	10.256	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	4.44	Drive Trace Energy Economy Rating	0	Drive Trace Inertia Work Ratio Rating	5.58	Integrated DC KW-HRS	2.443632	Manufacturer Fuel Economy	23.8263651		
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	10.256																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	4.44																		
Drive Trace Energy Economy Rating	0																		
Drive Trace Inertia Work Ratio Rating	5.58																		
Integrated DC KW-HRS	2.443632																		
Manufacturer Fuel Economy	23.8263651																		
Charge Depleting Bag/Phase #7																			
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>7.469</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>-0.15</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.42</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>-0.12</td></tr><tr><td>Integrated DC KW-HRS</td><td>1.464016</td></tr><tr><td>Manufacturer Fuel Economy</td><td>19.6012318</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	7.469	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	-0.15	Drive Trace Energy Economy Rating	-0.42	Drive Trace Inertia Work Ratio Rating	-0.12	Integrated DC KW-HRS	1.464016	Manufacturer Fuel Economy	19.6012318		
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	7.469																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	-0.15																		
Drive Trace Energy Economy Rating	-0.42																		
Drive Trace Inertia Work Ratio Rating	-0.12																		
Integrated DC KW-HRS	1.464016																		
Manufacturer Fuel Economy	19.6012318																		
Charge Depleting Bag/Phase #8																			
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>23.617</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>16.78</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>0.02</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>33.56</td></tr><tr><td>Integrated DC KW-HRS</td><td>7.482919</td></tr><tr><td>Manufacturer Fuel Economy</td><td>31.6844603</td></tr></table>		Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	23.617	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	16.78	Drive Trace Energy Economy Rating	0.02	Drive Trace Inertia Work Ratio Rating	33.56	Integrated DC KW-HRS	7.482919	Manufacturer Fuel Economy	31.6844603		
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	23.617																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	16.78																		
Drive Trace Energy Economy Rating	0.02																		
Drive Trace Inertia Work Ratio Rating	33.56																		
Integrated DC KW-HRS	7.482919																		
Manufacturer Fuel Economy	31.6844603																		
Manufacturer Test Comments		25MY NEa PE EV long range AWD 20in MCT Data over '99.99' have been set as '0' due to technical restrictions, but have actually obtained the following results: -> Charge Depleting Bag / Phase #4 DT-ASCR = 146.41 DT-IWRR = 292.80																	

Certification Summary Information Report

Test Group		VHYXV00.0W00			Evaporative/Refueling Family					--		
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 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
Fed	150,000 miles	Federal Tier 4 Bin 0	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--
CA	150,000 miles	California ZEV	CREE	0	--	--	--	0	--	0	--	--

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--
------------	--------------	------------------------------	----

Emission Data Vehicle Information

Vehicle ID / Configuration	NE1XAU5ESER307A / 0	Manufacturer Vehicle Configuration Number	0
Original Test Group Name	SHYXV00.0W00	Original Evaporative/Refueling Family	--
Original Test Vehicle Model Year	2025		

Vehicle Model

Represented Test Vehicle Make	Hyundai	Represented Test Vehicle Model	Ioniq 5
-------------------------------	---------	--------------------------------	---------

Leak Family Details

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

Drive Sources and Fuel System Details

Drive Source and Fuel#	Drive Source	Fuel
1	Electric Motor	Electricity

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	0	Odometer Correction Factor	1.0007
Odometer Correction Sign	- = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor		
Odometer Correction Units	Miles		
Engine Code	EM07	Rated Horsepower	321
Displacement (liters)	0.001		
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	All Wheel Drive
Shift Indicator Light Usage	Not equipped	Aged Emission Components	4,000 (mi)
Curb Weight (lbs)	4707	Equivalent Test Weight (pounds)	5000
GVWR (lbs)	5831	N/V Ratio	127.3
Axle Ratio	4.71		
Transmission Type	Automatic	# of Transmission Gears	1
Transmission Lockup	No	Creeper Gear	No

Dynamometer Coefficients:

Target Coefficients				Set Coefficients			EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients
Coefficient Category	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	A (lbf)	B (lbf/mph)	C (lbf/mph**2)	
City/Highway/Evap	29.592	0.50534	0.019847	-10.214	0.37384	0.018377	13.9

Emission Control Device Comments

This vehicle has two motors (front : 99, rear : 222hp)

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--
Manufacturer Test Vehicle Comments	25MY NE AWD 2 motor/Long range 18in XRT		

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--
Test #	SHYX10086732	Test Procedure	77 - Multi-Cycle Test (MCT)
Exhaust Test # for this Evap Test	--	Test Fuel Type	62 - Electricity
Test Date	05/09/2024	Fuel	Electricity
Fuel Batch ID	--	Fuel Calibration Number	--
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined
Verify Test Lab ID	772-1, Jangduck-Dong		
E10 Evaporative Test Measurement Method	--		
Test Start Odometer Reading	2244	Odometer Units	M
4WD Test Dyno	Yes	Diesel Adjustment Factor Usage	--
State of Charge Delta	Yes		
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes
PHEV/EV Charge Depleting Test Information			
Recharge Event Voltage	240	Recharge Event Energy (kiloWatt-hours)	93.2602
Charge Depleting Range (Calculated miles)	408.568	Charge Depleting Range (Actual miles)	408.568
Charge Depleting Range Highway (Calculated miles)	336.099	Derived 5-Cycle Coefficient Model Year	--
All Electric Range Unadjusted (miles)	--	Equivalent All Electric Range (miles)	408.568
Number of Charge Depleting Bags/Phases Conducted	8	Transition Bag/Phase Number	--
Charge Depleting Bag/Phase #1			
Test Result/Emission Name		Unrounded Test Result	
Actual Distance Driven (miles)		7.47	
Carbon-Related Exhaust Emissions		0	
Drive Trace Absolute Speed Change Rating		-0.67	
Drive Trace Energy Economy Rating		-0.56	
Drive Trace Inertia Work Ratio Rating		-0.35	
Integrated DC KW-HRS		1.692	
Manufacturer Fuel Economy		22.647	
Charge Depleting Bag/Phase #2			

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--																
	<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>10.256</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>4.36</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.01</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>5.47</td></tr><tr><td>Integrated DC KW-HRS</td><td>2.568</td></tr><tr><td>Manufacturer Fuel Economy</td><td>25.035</td></tr></table>	Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	10.256	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	4.36	Drive Trace Energy Economy Rating	-0.01	Drive Trace Inertia Work Ratio Rating	5.47	Integrated DC KW-HRS	2.568	Manufacturer Fuel Economy	25.035		
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	10.256																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	4.36																		
Drive Trace Energy Economy Rating	-0.01																		
Drive Trace Inertia Work Ratio Rating	5.47																		
Integrated DC KW-HRS	2.568																		
Manufacturer Fuel Economy	25.035																		
Charge Depleting Bag/Phase #3																			
	<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>7.467</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>-0.32</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.52</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>-0.01</td></tr><tr><td>Integrated DC KW-HRS</td><td>1.537</td></tr><tr><td>Manufacturer Fuel Economy</td><td>20.581</td></tr></table>	Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	7.467	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	-0.32	Drive Trace Energy Economy Rating	-0.52	Drive Trace Inertia Work Ratio Rating	-0.01	Integrated DC KW-HRS	1.537	Manufacturer Fuel Economy	20.581		
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	7.467																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	-0.32																		
Drive Trace Energy Economy Rating	-0.52																		
Drive Trace Inertia Work Ratio Rating	-0.01																		
Integrated DC KW-HRS	1.537																		
Manufacturer Fuel Economy	20.581																		
Charge Depleting Bag/Phase #4																			
	<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>202.727</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>54.35</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>0.03</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>0</td></tr><tr><td>Integrated DC KW-HRS</td><td>64.017</td></tr><tr><td>Manufacturer Fuel Economy</td><td>31.578</td></tr></table>	Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	202.727	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	54.35	Drive Trace Energy Economy Rating	0.03	Drive Trace Inertia Work Ratio Rating	0	Integrated DC KW-HRS	64.017	Manufacturer Fuel Economy	31.578		
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	202.727																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	54.35																		
Drive Trace Energy Economy Rating	0.03																		
Drive Trace Inertia Work Ratio Rating	0																		
Integrated DC KW-HRS	64.017																		
Manufacturer Fuel Economy	31.578																		
Charge Depleting Bag/Phase #5																			
	<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>7.47</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>-0.96</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.55</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>-0.41</td></tr><tr><td>Integrated DC KW-HRS</td><td>1.511</td></tr><tr><td>Manufacturer Fuel Economy</td><td>20.225</td></tr></table>	Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	7.47	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	-0.96	Drive Trace Energy Economy Rating	-0.55	Drive Trace Inertia Work Ratio Rating	-0.41	Integrated DC KW-HRS	1.511	Manufacturer Fuel Economy	20.225		
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	7.47																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	-0.96																		
Drive Trace Energy Economy Rating	-0.55																		
Drive Trace Inertia Work Ratio Rating	-0.41																		
Integrated DC KW-HRS	1.511																		
Manufacturer Fuel Economy	20.225																		
Charge Depleting Bag/Phase #6																			

Certification Summary Information Report

Test Group	VHYXV00.0W00	Evaporative/Refueling Family	--																
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>10.256</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>4.53</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.03</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>5.61</td></tr><tr><td>Integrated DC KW-HRS</td><td>2.548</td></tr><tr><td>Manufacturer Fuel Economy</td><td>24.844</td></tr></table>				Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	10.256	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	4.53	Drive Trace Energy Economy Rating	-0.03	Drive Trace Inertia Work Ratio Rating	5.61	Integrated DC KW-HRS	2.548	Manufacturer Fuel Economy	24.844
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	10.256																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	4.53																		
Drive Trace Energy Economy Rating	-0.03																		
Drive Trace Inertia Work Ratio Rating	5.61																		
Integrated DC KW-HRS	2.548																		
Manufacturer Fuel Economy	24.844																		
Charge Depleting Bag/Phase #7																			
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>7.468</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>-0.65</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.49</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>-0.25</td></tr><tr><td>Integrated DC KW-HRS</td><td>1.539</td></tr><tr><td>Manufacturer Fuel Economy</td><td>20.611</td></tr></table>				Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	7.468	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	-0.65	Drive Trace Energy Economy Rating	-0.49	Drive Trace Inertia Work Ratio Rating	-0.25	Integrated DC KW-HRS	1.539	Manufacturer Fuel Economy	20.611
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	7.468																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	-0.65																		
Drive Trace Energy Economy Rating	-0.49																		
Drive Trace Inertia Work Ratio Rating	-0.25																		
Integrated DC KW-HRS	1.539																		
Manufacturer Fuel Economy	20.611																		
Charge Depleting Bag/Phase #8																			
<table><tr><th>Test Result/Emission Name</th><th>Unrounded Test Result</th></tr><tr><td>Actual Distance Driven (miles)</td><td>26.041</td></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>0</td></tr><tr><td>Drive Trace Absolute Speed Change Rating</td><td>19.63</td></tr><tr><td>Drive Trace Energy Economy Rating</td><td>-0.02</td></tr><tr><td>Drive Trace Inertia Work Ratio Rating</td><td>39.25</td></tr><tr><td>Integrated DC KW-HRS</td><td>8.412</td></tr><tr><td>Manufacturer Fuel Economy</td><td>32.302</td></tr></table>				Test Result/Emission Name	Unrounded Test Result	Actual Distance Driven (miles)	26.041	Carbon-Related Exhaust Emissions	0	Drive Trace Absolute Speed Change Rating	19.63	Drive Trace Energy Economy Rating	-0.02	Drive Trace Inertia Work Ratio Rating	39.25	Integrated DC KW-HRS	8.412	Manufacturer Fuel Economy	32.302
Test Result/Emission Name	Unrounded Test Result																		
Actual Distance Driven (miles)	26.041																		
Carbon-Related Exhaust Emissions	0																		
Drive Trace Absolute Speed Change Rating	19.63																		
Drive Trace Energy Economy Rating	-0.02																		
Drive Trace Inertia Work Ratio Rating	39.25																		
Integrated DC KW-HRS	8.412																		
Manufacturer Fuel Economy	32.302																		
Manufacturer Test Comments																			
25MY NEa PE EV long range AWD 18in XRT MCT Data over '99.99' have been set as '0' due to technical restrictions, but have actually obtained the following results: -> Charge Depleting Bag / Phase #4 DT-IWRR = 108.68																			

Fuel Properties	
------------------------	--

Certification Summary Information Report

Test Group		VHYXV00.0W00			Evaporative/Refueling Family			--			
Consolidated List of Standards											
Exhaust Standards											
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Cert			
Vehicle Class		LDV/Passenger Car			Standard Level			California ZEV			
Fuel		Electricity			Test Procedure			Multi-Cycle Test (MCT)			
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
150,000 miles		CREE		--	--	--	--	--	--	0	0
Cert Region		Federal			Cert/In-Use Code			Cert			
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 4 Bin 0			
Fuel		Electricity			Test Procedure			Multi-Cycle Test (MCT)			
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
150,000 miles		CREE		--	--	--	--	--	--	0	0

Certification Summary Information Report

Test Group		VHYXV00.0W00	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		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	

Certification Summary Information Report

Test Group		VHYXV00.0W00	Evaporative/Refueling Family		--
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	

Certification Summary Information Report

Test Group		VHYYXV00.0W00	Evaporative/Refueling Family		--
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		

Certification Summary Information Report

Test Group		VHYYXV00.0W00	Evaporative/Refueling Family		--
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	