



## Application for Certification - Part 1

### Test Group (FOI)

- **Model Year:** 2027
- **Manufacturer Name:** Kia Corporation
- **Test Group:** VKMXV02.5DR3
- **Test Group Description:** 2.5 Liter / I4 GDPI / Otto-cycle
- **Durability Group:** VKMXGPGNNDNR3
- **Durability Group Description:** Monolith, WU-TWC + TWC
- **Vehicle Class:** LDV
- **Applicable Standards:** FED: Interim Tier4 SULEV30 / Tier4 Evap.  
CAL: LEV-IV SULEV30 / LEV-IV Evap.
- **Vehicle Tested:** EDV - DL3U7H5GA110A/0 (Exhaust)  
EDV - DN8U0H5GA023F/0 (Evap)  
FEDV - DL3U7H5GA112F/0  
FEDV - DL3U7H5GA108F/0
- **Carlines Covered by Certificate:** K5, K5 AWD
- **EPA Response Requested by:** May 15, 2026
- **For Questions, Contact:** Stephanie Wright  
Tel: 734-273-1904  
E-mail: [swright@hatci.com](mailto:swright@hatci.com)

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## **01.00          Correspondence and Communications**

Please refer to Common Section 01.00.

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

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## **02.00          Durability Group Description**

1. Durability Group Name : VKMXGPGNNDR3
2. Combustion Cycle : Otto cycle / four stroke
3. Engine Type : Piston / water cooled
4. Fuel Used : Gasoline
5. Basic Fuel Metering System : Direct & Port Injection
6. Catalyst Construction and location : See Section 02.02
7. Precious Metals in Catalyst : See Section 02.02
8. Precious Metal Loading for all  
Catalysts in the Durability Group : See Section 02.02
9. Range of Catalyst Grouping Statistics : See Section 02.02
10. Type of particulate filter : Catalyzed

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## **02.01          List of Vehicles in Durability Groups**

Please refer to Common Section 02.01.

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### **03.00        Evaporative/Refueling Family Description**

#### **03.00.01      Evaporative/Refueling Family Name: VKMXR0131DRG (C/O 20MY Sonata 2.5)**

##### **03.00.01.01   Evaporative/Refueling Family Parameters**

1. Type of vapor storage device: Canister (Number of canister: 1EA) , Air cleaner (1EA)

2. Basic canister design

| Evap.<br>code | Absorption<br>flow rate<br>(g/hr) | Nominal<br>working<br>capacity<br>(g) | Size<br>(cc) | Material | Medium              | Nominal<br>fuel tank<br>capacity<br>(gal) |
|---------------|-----------------------------------|---------------------------------------|--------------|----------|---------------------|-------------------------------------------|
| 131DRG        | 15                                | 131                                   | 2300         | Plastic  | Activated<br>Carbon | 15.9                                      |

3. Fuel system: Returnless fuel system

4. Type of refueling emission control system: Integrated type

5. Fillpipe seal mechanism: Liquid seal type

6. Vapor control system or method of vapor line to the canister:

- Fill limit vent valve (ORVR vent valve)
- Overfill limiter (2 way valve)
- Canister close valve

7. Purge control system

- Type of valve: Duty
- Purge control strategy: Controlled by ECU
- High load purge system: No
- Active purge system: No

8. Vapor hose material: Rubber

9. Fuel tank material: Plastic

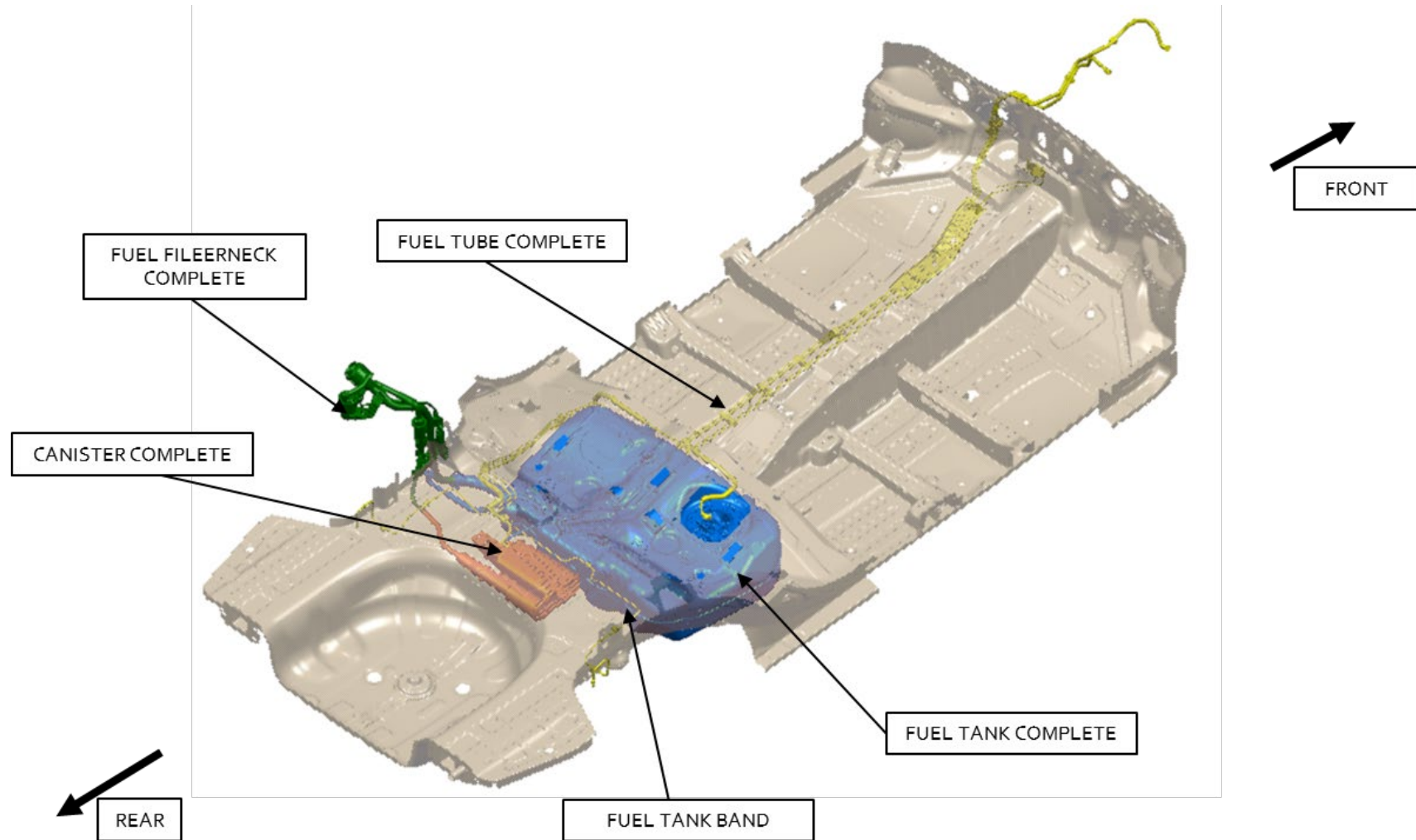
10. HC trap

- Media: Paper containing activated carbon
- Working capacity: 0.8g

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03.00.01.02

## Evaporative/Refueling Schematic

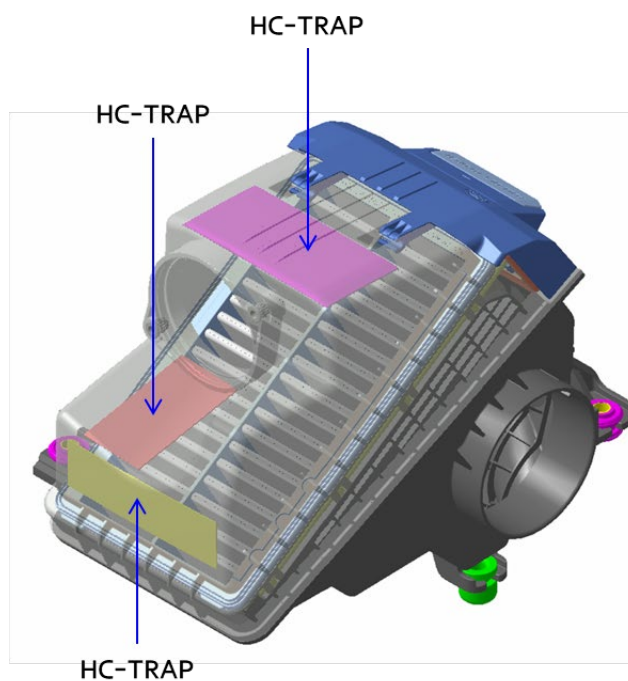
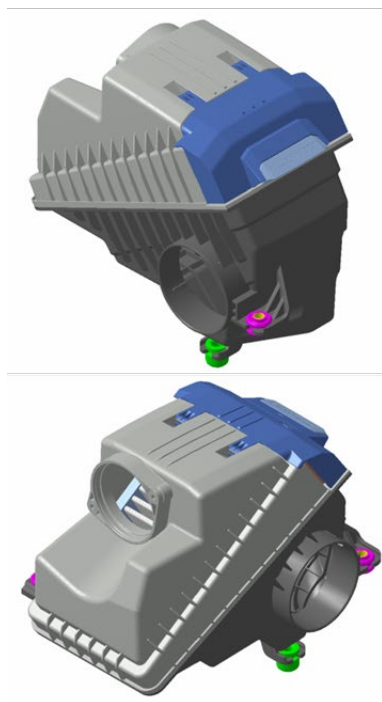


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### 03.00.01.03 HC-TRAP Schematic



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### **03.01          Evaporative/Refueling General Description**

Please refer to Common Section 03.01.

### **03.02          List of Vehicles in Evaporative Families**

Please refer to Common Section 03.02.

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#### **04.03 Exhaust Durability Test Procedure**

Please refer to Common Section 04.03 for details.

#### **04.04 Evaporative Durability Test Procedure**

Please refer to Common Section 04.04.

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## **05.00          Test Group Description**

|                                  |   |                                                                                                   |
|----------------------------------|---|---------------------------------------------------------------------------------------------------|
| Test group name                  | : | VKMXV02.5DR3                                                                                      |
| Engine displacement (L) covered  | : | 2.5L                                                                                              |
| Arrangement/number of cylinders  | : | I4                                                                                                |
| Vehicle class(s) covered         | : | LDV                                                                                               |
| Sales location/emission standard | : | FED: Interim Tier-4 Bin 30<br>CAL: LEV-IV SULEV 30<br>See CSI report for emission standard levels |

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## 06.00 Test Vehicle Description

### 1. Exhaust Durability Data Vehicle

A screenshot of KMHL64JA5TA534809 is included, and KMHL64JA6TA534799 has the same specifications as KMHL64JA5TA534809.

Verify Processing Report

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#### Verify Processing Report

Total Datasets Submitted: 1  
Accepted Datasets: 1  
Rejected Datasets: 0

The original datasets are listed below. In addition, any information generated by the Verify system is also included. For any rejected datasets, the reason(s) the dataset was rejected is provided below in the Transaction Report for that particular dataset.

#### Test Vehicle Information Submission

##### Test Vehicle Information Details

Information Process Code : N  
EPA Manufacturer Code : HYX  
Vehicle Identification Text : KMHL64JA5TA534809  
Vehicle Configuration Number : 0

##### Vehicle Configuration Details

##### Vehicle Description Details

Manufacturer Vehicle Configuration Number : 0  
Test Group Name : VHYXV02.5ER3  
Evaporative Refueling Family Name : VHYXR0131ERG  
Leak Family Identifier : DN1  
Leak Family Name : VHYXR0131ERG-DN1  
Model Year : 2027  
Actual Test Vehicle Make Text : Hyundai  
Actual Test Vehicle Model Text : Sonata

##### Drive Source Details

Drive Source Identifier : C  
Fuel Identifier : G

Test Drive Code : F  
Shift Indicator Light Usage Identifier : 1  
Aged Component Usage Identifier : 4

##### Odometer Correction Details

Correction Initial Value : 0  
Correction Factor Value : 1.0089  
Correction Sign Identifier : -  
Correction Units Code : M

Engine Code Text : G4KN-AC  
Engine Rated Horsepower Value : 186  
Engine Displacement Value : 2.5

##### Air Aspiration Details

Air Aspiration Method Identifier : NA

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**Vehicle Specifications Details**

Curb Weight Value : 3644  
Equivalent Test Weight Value : 4000  
Gross Vehicle Weight Rating Value : 4619  
NV Ratio Value : 29.5  
Axle Ratio Value : 3.51

**Transmission Specifications Details**

Light Duty Transmission Type Identifier : SA  
Transmission Lockup Indicator : Y  
Transmission Creeper Gear Indicator : N  
Transmission Gear Count : 8

**Target Set Coefficient Details**

Test Procedure Dynamometer Coefficients Category : C-H-E  
Target CoefficientA Value : 31.784  
Target CoefficientB Value : 0.51077  
Target CoefficientC Value : 0.014497  
Set CoefficientA Value : 11.953  
Set CoefficientB Value : 0.43682  
Set CoefficientC Value : 0.014275

**Target Set Coefficient Details**

Test Procedure Dynamometer Coefficients Category : US06  
Target CoefficientA Value : 31.784  
Target CoefficientB Value : 0.51077  
Target CoefficientC Value : 0.014497  
Set CoefficientA Value : 11.953  
Set CoefficientB Value : 0.43682  
Set CoefficientC Value : 0.014275

**Target Set Coefficient Details**

Test Procedure Dynamometer Coefficients Category : Cold-CO  
Target CoefficientA Value : 34.962  
Target CoefficientB Value : 0.56185  
Target CoefficientC Value : 0.015947  
Set CoefficientA Value : 6.886  
Set CoefficientB Value : 0.51001  
Set CoefficientC Value : 0.015071

Manufacturer Comment Text : 27MY DN8 2.5 AWD 18in

**EPA Generated Test Vehicle Details**

Original Receipt Date : 20260305  
Hybrid Vehicle Indicator : N  
Adjusted Loaded Vehicle Weight Value : 4131  
Loaded Vehicle Weight Value : 3944  
Total Road Load Horsepower Value : 12.5

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**Transaction Status Details**

Transaction Status Identifier : ACCEPTED

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## **2. Exhaust & Evaporative Emission Data Vehicle**

Please refer to CSI report in 07.00.

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**07.00        Test Results**  
**07.01        EV-CIS Certification Summary Information**

Certification Summary Information Report submitted to EV-CIS.

See 18.00.00.

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**2. LITMUS TEST SHEET**

\* Reference : §600.115-11

Litmus Test of EDV

| EDV   | FTP(75°F) | Cold FTP<br>(20°F) | HFET | US06 | SC03 |
|-------|-----------|--------------------|------|------|------|
| BAG1  | 28.9      | 22.0               | 46.3 | 17.9 | 23.1 |
| BAG2  | 28.0      | 24.9               |      | 33.8 |      |
| BAG3  | 32.6      | 30.2               |      |      |      |
| TOTAL | 29.3      |                    |      | 28.2 |      |

(1) Determining the City FE Method

|                                                                                   |  |  |        |
|-----------------------------------------------------------------------------------|--|--|--------|
| 5 Cycle City Criteria<br>(Specific 5 cycle City FE $\geq$ 0.96 Mpg Based City FE) |  |  | Passed |
|-----------------------------------------------------------------------------------|--|--|--------|

|         |                                   | UNROUNDED   | ADJ. ROUNDED | Examination | Decision |
|---------|-----------------------------------|-------------|--------------|-------------|----------|
| CITY FE | MPG BASED                         | 22.89122768 | 22.0         | Applicable  | Selected |
|         | 5-CYCLE                           | 23.05096863 | 23.1         | Applicable  |          |
|         | Ratio of 5CYCLE to 0.96 MPG-BASED |             | 105.00       |             |          |

CRITERIA : 100%

(2) Determining the Hwy FE Method

|                                                                                    |  |  |        |
|------------------------------------------------------------------------------------|--|--|--------|
| 5 Cycle Highway Criteria<br>(Specific 5 cycle HWY FE $\geq$ 0.95 Mpg Based HWY FE) |  |  | Passed |
|------------------------------------------------------------------------------------|--|--|--------|

|        |                                   | UNROUNDED | ADJ. ROUNDED | Examination    | Decision |
|--------|-----------------------------------|-----------|--------------|----------------|----------|
| HWY FE | MPG BASED                         | 32.1028   | 30.5         | Select This    | Selected |
|        | 5-CYCLE                           | 31.4722   | 31.5         | Not Applicable |          |
|        | MODIFIED                          | 31.4952   | 31.5         | Not Applicable |          |
|        | Ratio of 5CYCLE to 0.95 MPG-BASED |           | 103.28       |                |          |

CRITERIA : 100%

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## **08.00          Emission Compliance Statement**

Please refer to Common Section 08.00.

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## **09.00            OBD System Description**

The on-board diagnostic (OBD) system complies with 40 CFR 86.1806-17, 86.1806-27 per the compliance option allowing demonstration of compliance with California OBD II requirements in Title 13 California Code of Regulation 1968.2 (13 CCR 1968.2) approved on November 30, 2022. Please refer to OBD application uploaded in EV-CIS system.

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## **10.00          Description of Alternate-Fueled Vehicles: Not Applicable**

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## 12.00 Description of Vehicles Covered by Certificate and Test Parameters

### 12.01 Vehicle Parameters

|                                     |                                               |                       |                      |
|-------------------------------------|-----------------------------------------------|-----------------------|----------------------|
| Carline                             |                                               | 329                   | 328                  |
| Model Name                          |                                               | K5 AWD                | K5                   |
| Vehicle Classification              |                                               | LDV                   |                      |
| Emission control System description | Type, number and configuration of catalyst(s) | See Sec. 02.02        |                      |
|                                     | EGR Type                                      | Electronic            |                      |
|                                     | Air pump type                                 | N/A                   |                      |
|                                     | Fuel system type                              | DFI, SFI              |                      |
|                                     | Intake air aspiration method                  | Natural               |                      |
|                                     | Other                                         | -                     |                      |
| Engine Code                         |                                               | G4KN-AC               |                      |
| Number of valves per cylinder       |                                               | 4                     |                      |
| Engine Displacement (L)             |                                               | 2.5                   |                      |
| Sales area                          |                                               | 50-State              |                      |
| Transmission and overdrive          |                                               | AWD SA8               | FWD SA8 + Stop/Start |
| SIL                                 |                                               | N/A                   | N/A                  |
| Tire                                |                                               | 235/45R18<br>Pirelli  | 205/65R16<br>Kumho   |
| N/V Ratios                          |                                               | 26.8                  | 26.8                 |
| ETW(lb)                             |                                               | 3875                  | 3500                 |
| Elec. Dyno. Target Coefficient      |                                               | Please refer to 07.02 |                      |
| Fuel tank volume(gal)               |                                               | 15.9                  |                      |

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## **12.02.02     Engine Starting Procedures**

Please refer to Common Section 12.02.02.

## **12.02.03     Shift Schedules**

Please refer to Common Section 12.02.03.01

## **12.02.04     Transmission / Advanced Technology System Test Modes**

Please refer to Common Section 12.02.04.

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## **13.00        Projected Sales**

Please refer to Common Section 13.00.

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## 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 VKMXV02.5DR3  
/Evaporative Family VKMXR0131DRG

Ms. Kathryn Kochunas:

Kia Corporation 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 the 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](mailto:swright@hatci.com) or (734) 273-1904.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. H. Ji'.

C. H. Ji  
General Manager  
Regulation & Certification Team2  
Kia Company

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Issued : 04-02-2026  
Revised:



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

Subject: Request for an Executive Order for 2027 Model Year Test Group VKMXV02.5DR3  
/Evaporative Family VKMXR0131DRG

Dear Ms. Robin U. Lang:

Kia Corporation 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 the 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@hatci.com](mailto:swright@hatci.com) or (734) 273-1904.

Sincerely,

---

C. H. Ji  
General Manager  
Regulation & Certification Team2  
Kia Company

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**15.00      Other Information**  
**15.01      Certification Fee Filing Form**

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**15.02      Vehicle Emission Control Information (VECI) Label**

|                                                                                   |                                                                       |                                         |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------|-----------------------------------------|
|  | <b>KIA CORPORATION</b><br><b>VEHICLE EMISSION CONTROL INFORMATION</b> |                                         |
| <b>Conforms to regulations :</b>                                                  |                                                                       | <b>2027 MY</b>                          |
| <b>U.S.EPA : Interim T4B30 LDV</b>                                                |                                                                       | <b>OBD : CA II      Fuel : Gasoline</b> |
| <b>California : LEV IV SULEV30 PC</b>                                             |                                                                       | <b>OBD : CA II      Fuel : Gasoline</b> |
| <b>No adjustments needed.</b>                                                     | <b>DFI, SFI, WR-HO2S, HO2S, WU-TWC, TWC, GPF, EGR, EGRC</b>           |                                         |
| <b>Group : VKMXV02.5DR3</b><br><b>Evap. : VKMXR0131DRG</b>                        | <b>UH</b>                                                             | <b>32450-2S334</b>                      |

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### **15.03        ORVR Safety Statement**

Kia uses standard technology in all ORVR systems for 2027MY vehicles. In accordance with EPA Guidance Letter CISC-06-06, ORVR applications will not be submitted.

### **15.04        New Technology System Description**

Please refer to Common Section 15.04.

### **15.05        Engine Oil Information**

Please refer to Common Section 15.05

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## **16.00 California ARB Information**

### **16.01 Exhaust Emission Control System (Tune-up label)**

| Test Group Name | Model      | Exhaust Emission Control System                             |
|-----------------|------------|-------------------------------------------------------------|
| VKMXV02.5DR3    | K5, K5 AWD | DFI,SFI, WR-HO2S, HO2S, WU-TWC, TWC, GPF, EGR, EGRC, OBD-II |

Note:

|         |                                                         |
|---------|---------------------------------------------------------|
| DFI     | : Direct Fuel Injection                                 |
| SFI     | : Sequential multipoint (Electronic) Fuel Injection     |
| WR-HO2S | : Wide Range/Linear/Air-Fuel Ratio Heated Oxygen Sensor |
| HO2S    | : Heated Oxygen Sensor                                  |
| WU-TWC  | : Warm up Three Way Catalyst System                     |
| TWC     | : Three Way Catalyst System                             |
| GPF     | : Gasoline Particle Filter                              |
| EGR     | : Exhaust Gas Recirculation                             |
| EGRC    | : EGR Cooler                                            |
| OBD II  | : On-Board Diagnostics II                               |

### **16.02 Test Procedures**

Please refer to Common Section 16.02.

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## **16.03.00      Fill Pipe Access Zones Statement and Specifications**

### **16.03.01      Fill Pipe Access Zones Statement**

Please refer to Common Section 16.03.01.

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#### **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.

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## **16.05.00      Emission Testing Waiver Statement**

Please refer to Common Section 16.05.00.

## **16.06.00      Projected Sales**

Please refer to Common Section 13.00.

## **16.07.00      OBD-II System Description**

Please refer to section 09.00.

## **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-Kia 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.

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## 16.10.00

## AECD General Statements

The vehicles contained in this test group are not equipped with a defeat device and are not equipped with alternative mapping strategies. Furthermore, all AECDs have been declared and described in the application.

As described in our application, the vehicle's transmission is not part of any AECD. However, the transmission gear is an input for the emissions control strategy, as described in that application. The ECU does not provide an output to the TCU to control emissions strategy.

When driving conditions on the road can be properly represented on the dynamometer, the transmission will perform in the same manner. However, there are some different driving conditions, such as an uphill or downhill grade, extreme heat or extreme cold conditions, heavy braking, and curved road driving conditions, which cannot be appropriately represented on the dynamometer. In these conditions where necessary to protect the transmission or to prevent an unnatural shift pattern, a different shift pattern may be executed. It is our understanding that this is commonly used throughout the industry.

The Hyundai-Kia American Technical Center and the Hyundai Motor Group Research and Development Center in Namyang, Korea have endeavored to respond based on our understanding of the regulatory definition of an AECD, the past certification reviews of AECDs conducted by ARB, existing guidance regarding AECDs issued by ARB, and, of course, EPA's and ARB's increased interest in this area. We will continue to monitor guidance issued by ARB regarding the level of information and detail desired in a certification application, and will continue to evaluate AECD issues to ensure transparency with respect to our vehicle and engine performance.

VKMXV02.5DR3 - Kia K5 2.5L GDPI (GPF) - Part 1

Issued : 04-02-2026

Revised:

**16.11.00                    California 7warranty compliance**

Please refer to Common Section 16.11.00.

**16.12.00                    Description of the Propulsion System: Not Applicable**

**16.13.00                    ZEV Compliance: Not Applicable**

VKMXV02.5DR3 - Kia K5 2.5L GDPI (GPF) - Part 1  
Issued : 04-02-2026  
Revised:

## **17.00.00      Service of Process**

Please refer to Common Section 01.00.

VKMXV02.5DR3 - Kia K5 2.5L GDPI (GPF) - Part 1  
Issued : 04-02-2026  
Revised:

## **18.00.00     Attachment**

### **1.   CSI Report**

VKMXV02.5DR3 - Kia K5 2.5L GDPI (GPF) - Part 1  
Issued   : 04-02-2026  
Revised:

## Certification Summary Information Report

|                                   |                 |                                     |                        |
|-----------------------------------|-----------------|-------------------------------------|------------------------|
| <b>Manufacturer</b>               | Kia Corporation | <b>Manufacturer Code</b>            | KMX                    |
| <b>Test Group</b>                 | VKMXV02.5DR3    | <b>Evaporative/Refueling Family</b> | VKMXR0131DRG           |
| <b>Certificate Number</b>         | --              | <b>CARB Executive Order #</b>       | --                     |
| <b>Certificate Issue Date</b>     | --              | <b>Certificate Revision Date</b>    | --                     |
| <b>Certificate Effective Date</b> | --              | <b>Conditional Certificate</b>      | --                     |
| <b>CSI Revision #</b>             | --              | <b>CSI Submission/Revision Date</b> | 04/07/2026 02:46:26 AM |
| <b>Model Year</b>                 | 2027            |                                     |                        |

  
**Test Group Information**

|                          |            |                                        |    |
|--------------------------|------------|----------------------------------------|----|
| <b>CSI Type</b>          | New        | <b>Running Change Reference Number</b> | -- |
| <b>GHG Exempt Status</b> | Not Exempt |                                        |    |

  
**Drive Sources and Fuel(s)**

**Drive Source #1:** Combustion Engine

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

|                                                     |                                                                                                                                                                                                            |                                                            |              |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|--------------|
| <b>Hybrid Indicator</b>                             | No                                                                                                                                                                                                         |                                                            |              |
| <b>Multiple Fuel Storage</b>                        | --                                                                                                                                                                                                         | <b>Rechargeable Energy Storage System Indicator</b>        | --           |
| <b>Multiple Fuel Combustion</b>                     | --                                                                                                                                                                                                         | <b>Off-board Charge Capable Indicator</b>                  | --           |
| <b>Fuel Cell Indicator</b>                          | --                                                                                                                                                                                                         | <b>EPA Vehicle Class</b>                                   | LDV          |
| <b>Federal Clean Fuel Vehicle</b>                   | No                                                                                                                                                                                                         | <b>Federal Clean Fuel Vehicle Standard</b>                 | --           |
| <b>Federal Clean Fuel Vehicle ILEV</b>              | No                                                                                                                                                                                                         | <b>California Partial Zero Emissions Vehicle Indicator</b> | No           |
| <b>Durability Group Name</b>                        | VKMXGPGNNDR3                                                                                                                                                                                               | <b>Durability Group Equivalency Factor</b>                 | 1.0          |
| <b>Reduced Fee Test Group</b>                       | No                                                                                                                                                                                                         | <b>Certification Region Code(s)</b>                        | FA, CA       |
| <b>Complies with HD GHG 2b/3 regulations?</b>       | No                                                                                                                                                                                                         |                                                            |              |
| <b>Introduction into Commerce Date</b>              | --                                                                                                                                                                                                         | <b>CAP2000 Conditional Certificate?</b>                    | N/A          |
| <b>Independent Commercial Importer?</b>             | --                                                                                                                                                                                                         | <b>Alternative Fuel Converter Certificate?</b>             | --           |
| <b>SFTP Federal Composite Compliance Identifier</b> | Tier 3                                                                                                                                                                                                     | <b>SFTP Tier 2 Composite CO Option</b>                     | No           |
| <b>SFTP LEV-III Composite Compliance Indicator</b>  | No                                                                                                                                                                                                         |                                                            |              |
| <b>OBD Compliance Type</b>                          | CARB                                                                                                                                                                                                       | <b>OBD Demonstration Vehicle Test Group</b>                | VHYXV02.5UP3 |
| <b>Test Group OBD Compliance Level</b>              | Full - no deficiencies                                                                                                                                                                                     | <b>Number of Test Group OBD Deficiencies</b>               | 0            |
| <b>OBD Deficiencies Comments</b>                    | --                                                                                                                                                                                                         |                                                            |              |
| <b>Mfr Test Group Comments</b>                      | The fuel for Litmus test is E0. Litmus result(Value/Threshold): City(23.1/22.0) HWY(31.5/30.5). Test No: VKMX91006720(FTP), VKMX91006719(HWY), VKMX91006718(US06), VKMX10092930(SC03), VKMX10092931(Cold). |                                                            |              |
| <b>Mfr Exhaust / Evap Standards Comments</b>        | --                                                                                                                                                                                                         |                                                            |              |

## Certification Summary Information Report

|                                                                             |                                                  |                                                           |                                     |                      |                     |                     |                       |
|-----------------------------------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------|-------------------------------------|----------------------|---------------------|---------------------|-----------------------|
| <b>Test Group</b>                                                           | VKM XV02.5DR3                                    | <b>Evaporative/Refueling Family</b>                       | VKM XR0131DRG                       |                      |                     |                     |                       |
| <b>Evaporative/Refueling Family Information</b>                             |                                                  |                                                           |                                     |                      |                     |                     |                       |
| <b>Evaporative Summary Information Type</b>                                 | New                                              | <b>Submission/Correction Date</b>                         | 03/17/2026 01:34:20 AM              |                      |                     |                     |                       |
| <b>Integrated ORVR?</b>                                                     | Yes                                              | <b>Fuel(s)</b>                                            | Gasoline                            |                      |                     |                     |                       |
| <b>Multiple Fuel Storage</b>                                                | --                                               |                                                           |                                     |                      |                     |                     |                       |
| <b>Bladder Fuel Tank?</b>                                                   | No                                               |                                                           |                                     |                      |                     |                     |                       |
| <b>Fuel Tank Material</b>                                                   | Plastic                                          | <b>Fuel Tank Material Description</b>                     | HDPE                                |                      |                     |                     |                       |
| <b>Fill Pipe Seal Type</b>                                                  | Liquid seal                                      |                                                           |                                     |                      |                     |                     |                       |
| <b>Air Intake System Vapor Storage Device?</b>                              | Yes                                              | <b>Air Intake System Vapor Storage Device Description</b> | HC-TRAP                             |                      |                     |                     |                       |
| <b>Fuel System Vapor Storage Canister?</b>                                  | Yes                                              | <b>Other Vapor Storage</b>                                | --                                  |                      |                     |                     |                       |
| <b>Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)</b> | 131                                              | <b>Number of Primary Canisters</b>                        | 1                                   |                      |                     |                     |                       |
| <b>Number of Bleed Canisters</b>                                            | 0                                                | <b>Bleed Canister Total Working Capacity (grams)</b>      | --                                  |                      |                     |                     |                       |
| <b>Mfr Evaporative/Refueling Family Comments</b>                            | --                                               |                                                           |                                     |                      |                     |                     |                       |
| <b>Leak Family Details</b>                                                  |                                                  |                                                           |                                     |                      |                     |                     |                       |
| <b>Leak Family Indicator</b>                                                | Yes                                              |                                                           |                                     |                      |                     |                     |                       |
| <b>Canister Bleed Test Indicator</b>                                        | Yes                                              | <b>Applicability of Evaporative Canister Bleed Test</b>   | 50 State                            |                      |                     |                     |                       |
| <b>Evaporative Canister Bleed Test Comments</b>                             | --                                               |                                                           |                                     |                      |                     |                     |                       |
| <b>CARB Fuel Only (Rig) Test Indicator</b>                                  | No                                               | <b>Applicability of CARB Fuel Only (Rig) Test</b>         | --                                  |                      |                     |                     |                       |
| <b>CARB Fuel Only (Rig) Test Comments</b>                                   | --                                               |                                                           |                                     |                      |                     |                     |                       |
| <b>Leak Family Name</b>                                                     | <b>Applicability of Leak Family Requirements</b> | <b>Leak Family Standard (inches)</b>                      | <b>Leak Family Description</b>      |                      |                     |                     |                       |
| VKM XR0131DRG-DL3                                                           | 50 State                                         | 0.02                                                      | --                                  |                      |                     |                     |                       |
| <b>Models Covered by this Certificate</b>                                   |                                                  |                                                           |                                     |                      |                     |                     |                       |
| <b>Carline Manufacturer</b>                                                 | <b>Division</b>                                  | <b>Carline</b>                                            | <b>Certification Region Code(s)</b> | <b>Drive System</b>  | <b>Trans - Type</b> | <b>- # of Gears</b> | <b>Trans - Lockup</b> |
| Kia Corporation                                                             | 1 - KIA                                          | 328 - K5                                                  | California + CAA Section 177 states | 2-Wheel Drive, Front | Semi-Automatic      | 8                   | Yes                   |
| Kia Corporation                                                             | 1 - KIA                                          | 329 - K5 AWD                                              | California + CAA Section 177 states | All Wheel Drive      | Semi-Automatic      | 8                   | Yes                   |
| Kia Corporation                                                             | 1 - KIA                                          | 328 - K5                                                  | Federal                             | 2-Wheel Drive, Front | Semi-Automatic      | 8                   | Yes                   |
| Kia Corporation                                                             | 1 - KIA                                          | 329 - K5 AWD                                              | Federal                             | All Wheel Drive      | Semi-Automatic      | 8                   | Yes                   |
| <b>Engine Description</b>                                                   |                                                  |                                                           |                                     |                      |                     |                     |                       |
| <b>Hybrid Type</b>                                                          | --                                               | <b>Hybrid Description</b>                                 | --                                  |                      |                     |                     |                       |
| <b>Engine Type</b>                                                          | 4-Stroke Spark Ignition                          | <b>Mfr Engine Description</b>                             | --                                  |                      |                     |                     |                       |
| <b>Engine Block Arrangement</b>                                             | Inline                                           | <b>Mfr Engine Block Arrangement Description</b>           | --                                  |                      |                     |                     |                       |
| <b>Camless Valvetrain Indicator</b>                                         | No                                               | <b>Oil Viscosity/Classification</b>                       | SAE 0W20                            |                      |                     |                     |                       |
| <b>Number of Cylinders/Rotors</b>                                           | 4                                                | <b>Mechanically Variable Compression Ratio Indicator</b>  | N                                   |                      |                     |                     |                       |

## Certification Summary Information Report

|                                                  |              |                                    |              |                                                         |                |                           |                              |                                  |                                 |                                     |                              |
|--------------------------------------------------|--------------|------------------------------------|--------------|---------------------------------------------------------|----------------|---------------------------|------------------------------|----------------------------------|---------------------------------|-------------------------------------|------------------------------|
| <b>Test Group</b>                                |              | VKMXV02.5DR3                       |              | <b>Evaporative/Refueling Family</b>                     |                | VKMXR0131DRG              |                              |                                  |                                 |                                     |                              |
| <b>After Treatment Device(s) (ATD)</b>           |              |                                    |              |                                                         |                |                           |                              |                                  |                                 |                                     |                              |
| <b>ATD Number</b>                                |              | <b>ATD Type</b>                    |              | <b>ATD Precious Metal</b>                               |                | <b>Substrate Material</b> |                              | <b>Substrate Construction</b>    |                                 |                                     |                              |
| 1                                                |              | Three-way catalyst                 |              | Platinum + Palladium + Rhodium                          |                | Ceramic                   |                              | Monolith                         |                                 |                                     |                              |
| 2                                                |              | Other                              |              | Platinum + Palladium + Rhodium                          |                | Ceramic                   |                              | Monolith                         |                                 |                                     |                              |
| 3                                                |              | Three-way catalyst                 |              | Platinum + Rhodium                                      |                | Ceramic                   |                              | Monolith                         |                                 |                                     |                              |
| <b>Mfr After Treatment Device (ATD) Comments</b> |              | ATD #2 type = other(Catalyzed GPF) |              |                                                         |                |                           |                              |                                  |                                 |                                     |                              |
| <b>Direct Ozone Reduction (DOR) Device</b>       |              | Not Equipped                       |              |                                                         |                |                           |                              |                                  |                                 |                                     |                              |
| <b>Mfr Emission Control Device Comments</b>      |              | --                                 |              |                                                         |                |                           |                              |                                  |                                 |                                     |                              |
| <b>Engine Configuration Number 1</b>             |              |                                    |              |                                                         |                |                           |                              |                                  |                                 |                                     |                              |
| <b>Engine Displacement (liters)</b>              |              | 2.5                                |              | <b>Engine Rated Horsepower</b>                          |                | 186                       |                              |                                  |                                 |                                     |                              |
| <b>Number of Inlet Valves Per Cylinder</b>       |              | 2                                  |              | <b>Number of Exhaust Valves Per Cylinder</b>            |                | 2                         |                              |                                  |                                 |                                     |                              |
| <b>Air Aspiration Method</b>                     |              | Naturally Aspirated                |              | <b>Number of Air Aspiration Devices</b>                 |                | --                        |                              |                                  |                                 |                                     |                              |
| <b>Air Aspiration Device Configuration</b>       |              | --                                 |              | <b>Charge Air Cooler Type</b>                           |                | --                        |                              |                                  |                                 |                                     |                              |
| <b>Air Aspiration Drive Method(s)</b>            |              | Mechanical                         |              |                                                         |                |                           |                              |                                  |                                 |                                     |                              |
| <b>Cylinder Deactivation</b>                     |              | No                                 |              |                                                         |                |                           |                              |                                  |                                 |                                     |                              |
| <b>Cylinder Deactivation Description</b>         |              | --                                 |              |                                                         |                |                           |                              |                                  |                                 |                                     |                              |
| <b>Variable Valve Timing</b>                     |              | Yes                                |              |                                                         |                |                           |                              |                                  |                                 |                                     |                              |
| <b>Variable Valve Timing System Description</b>  |              | VVT                                |              |                                                         |                |                           |                              |                                  |                                 |                                     |                              |
| <b>Variable Valve Lift?</b>                      |              | No                                 |              |                                                         |                |                           |                              |                                  |                                 |                                     |                              |
| <b>Variable Valve Lift System Description</b>    |              | --                                 |              |                                                         |                |                           |                              |                                  |                                 |                                     |                              |
| <b>Number of Knock Sensors</b>                   |              | 1                                  |              | <b>Number of Air/Fuel Sensors</b>                       |                | 2                         |                              |                                  |                                 |                                     |                              |
| <b>Air/Fuel Sensor # 1 Type</b>                  |              | Heated oxygen                      |              | <b>Air/Fuel Sensor # 1 Description</b>                  |                | --                        |                              |                                  |                                 |                                     |                              |
| <b>Air/Fuel Sensor # 2 Type</b>                  |              | Other                              |              | <b>Air/Fuel Sensor # 2 Description</b>                  |                | WR-HO2S                   |                              |                                  |                                 |                                     |                              |
| <b>Mfr Air/Fuel Sensor Comments</b>              |              | --                                 |              |                                                         |                |                           |                              |                                  |                                 |                                     |                              |
| <b>Exhaust Gas Recirculation</b>                 |              | Yes                                |              | <b>Cooled Exhaust Gas Recirculation</b>                 |                | Yes                       |                              |                                  |                                 |                                     |                              |
| <b>EGR Type</b>                                  |              | Electronic/Electric                |              | <b>Exhaust Gas Recirculation Description if 'Other'</b> |                | --                        |                              |                                  |                                 |                                     |                              |
| <b>Closed Loop Air Injection System</b>          |              | No                                 |              |                                                         |                |                           |                              |                                  |                                 |                                     |                              |
| <b>Air Injection Type</b>                        |              | --                                 |              | <b>Air Injection Type if 'Other'</b>                    |                | --                        |                              |                                  |                                 |                                     |                              |
| <b>Mfr Engine Configuration Comments</b>         |              | --                                 |              |                                                         |                |                           |                              |                                  |                                 |                                     |                              |
| <b>Official Test Numbers</b>                     |              |                                    |              |                                                         |                |                           |                              |                                  |                                 |                                     |                              |
| <b>Test Group</b>                                | <b>Fuel</b>  | <b>FTP</b>                         | <b>US06</b>  | <b>SC03</b>                                             | <b>Cold CO</b> | <b>Highway</b>            | <b>EPA City Litmus Value</b> | <b>EPA City Litmus Threshold</b> | <b>EPA Highway Litmus Value</b> | <b>EPA Highway Litmus Threshold</b> | <b>CREE Weighting Factor</b> |
| Gasoline                                         | VKMX91006733 | VKMX91006730                       | VKMX10092924 | VKMX10092925                                            | VKMX91006734   | 63.7                      | 21.9                         | 120.8                            | 30.7                            | --                                  |                              |

Certification Summary Information Report

|                                    |  |              |  |                              |  |              |  |
|------------------------------------|--|--------------|--|------------------------------|--|--------------|--|
| Test Group                         |  | VKMXV02.5DR3 |  | Evaporative/Refueling Family |  | VKMXR0131DRG |  |
| SFTP LEV-III Official Test Numbers |  |              |  |                              |  |              |  |
| Test Group Fuel                    |  | FTP          |  | US06                         |  | SC03         |  |
| Gasoline                           |  | VKMX91006733 |  | VKMX91006730                 |  | VKMX10092924 |  |

## Certification Summary Information Report

|                   |              |                                     |              |
|-------------------|--------------|-------------------------------------|--------------|
| <b>Test Group</b> | VKMXV02.5DR3 | <b>Evaporative/Refueling Family</b> | VKMXR0131DRG |
|-------------------|--------------|-------------------------------------|--------------|

  
**Emission Data Vehicle Information**

|                                         |                   |                                                  |              |
|-----------------------------------------|-------------------|--------------------------------------------------|--------------|
| <b>Vehicle ID / Configuration</b>       | DN8U0H5GA023F / 0 | <b>Manufacturer Vehicle Configuration Number</b> | 0            |
| <b>Original Test Group Name</b>         | LHYXV02.5ER3      | <b>Original Evaporative/Refueling Family</b>     | LHYXR0125ERG |
| <b>Original Test Vehicle Model Year</b> | 2020              |                                                  |              |

**Vehicle Model**

|                                      |         |                                       |        |
|--------------------------------------|---------|---------------------------------------|--------|
| <b>Represented Test Vehicle Make</b> | Hyundai | <b>Represented Test Vehicle Model</b> | Sonata |
|--------------------------------------|---------|---------------------------------------|--------|

  
**Leak Family Details**

|                               |     |                         |                  |
|-------------------------------|-----|-------------------------|------------------|
| <b>Leak Family Identifier</b> | DN1 | <b>Leak Family Name</b> | LHYXR0125ERG-DN1 |
|-------------------------------|-----|-------------------------|------------------|

  
**Drive Sources and Fuel System Details**

| Drive Source and Fuel# | Drive Source      | Fuel     |
|------------------------|-------------------|----------|
| 1                      | Combustion Engine | Gasoline |

|                                           |                                                                                                 |                                                       |                      |
|-------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------|----------------------|
| <b>Hybrid Indicator</b>                   | No                                                                                              |                                                       |                      |
| <b>Multiple Fuel Storage</b>              | --                                                                                              | <b>Multiple Fuel Combustion</b>                       | --                   |
| <b>Fuel Cell Indicator</b>                | --                                                                                              | <b>Rechargeable Energy Storage System Indicator</b>   | --                   |
| <b>Rechargeable Energy Storage System</b> | --                                                                                              | <b>Rechargeable Energy Storage System, if 'Other'</b> | --                   |
| <b>Off-board charge Capable Indicator</b> | --                                                                                              |                                                       |                      |
| <b>Odometer Correction -- Initial</b>     | 0                                                                                               | <b>Odometer Correction Factor</b>                     | 0.982                |
| <b>Odometer Correction Sign</b>           | - = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor |                                                       |                      |
| <b>Odometer Correction Units</b>          | Miles                                                                                           |                                                       |                      |
| <b>Engine Code</b>                        | G4KN-ACS                                                                                        | <b>Rated Horsepower</b>                               | 191                  |
| <b>Displacement (liters)</b>              | 2.5                                                                                             |                                                       |                      |
| <b>Air Aspiration Method</b>              | Naturally Aspirated                                                                             | <b>Air Aspiration Method, if 'Other'</b>              |                      |
| <b>Number of Air Aspiration Devices</b>   | --                                                                                              | <b>Air Aspiration Device Configuration</b>            | --                   |
| <b>Charge Air Cooler Type</b>             | --                                                                                              | <b>Drive Mode While Testing</b>                       | 2-Wheel Drive, Front |
| <b>Shift Indicator Light Usage</b>        | Not equipped                                                                                    | <b>Aged Emission Components</b>                       | 4,000 (mi)           |
| <b>Curb Weight (lbs)</b>                  | 3120                                                                                            | <b>Equivalent Test Weight (pounds)</b>                | 3375                 |
| <b>GVWR (lbs)</b>                         | 4354                                                                                            | <b>N/V Ratio</b>                                      | 27                   |
| <b>Axle Ratio</b>                         | 3.2                                                                                             |                                                       |                      |
| <b>Transmission Type</b>                  | Semi-Automatic                                                                                  | <b># of Transmission Gears</b>                        | 8                    |
| <b>Transmission Lockup</b>                | Yes                                                                                             | <b>Creep Gear</b>                                     | 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) |
| <b>City/Highway/Evap</b> | 24.194  | 0.30292     | 0.015435         | 2.901   | 0.39728     | 0.013678                                                                      | 10.4           |
| <b>US06</b>              | 24.194  | 0.30292     | 0.015435         | 2.901   | 0.39728     | 0.013678                                                                      | N/A            |

## Certification Summary Information Report

| <b>Test Group</b>                                                                                                                                                                                                                                                                                             | VKMXV02.5DR3                                                 | <b>Evaporative/Refueling Family</b>                      | VKMXR0131DRG                        |                       |                       |                                                          |                                                           |                  |    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------|-------------------------------------|-----------------------|-----------------------|----------------------------------------------------------|-----------------------------------------------------------|------------------|----|
| <b>Emission Control Device Comments</b>                                                                                                                                                                                                                                                                       | w/Stop&Start                                                 |                                                          |                                     |                       |                       |                                                          |                                                           |                  |    |
| <b>Manufacturer Test Vehicle Comments</b>                                                                                                                                                                                                                                                                     | 20MY DN8a 2.5L 16" Tire w/Stop&Start (ETW:3375)_Evap Vehicle |                                                          |                                     |                       |                       |                                                          |                                                           |                  |    |
| <b>Test #</b>                                                                                                                                                                                                                                                                                                 | <b>LHYX10059890</b>                                          | <b>Test Procedure</b>                                    | <b>38 - CA fuel 3-day evap.</b>     |                       |                       |                                                          |                                                           |                  |    |
| <b>Exhaust Test # for this Evap Test</b>                                                                                                                                                                                                                                                                      | LHYX10059882                                                 | <b>Test Fuel Type</b>                                    | 46 - CARB LEV3 E10 Regular Gasoline |                       |                       |                                                          |                                                           |                  |    |
| <b>Test Date</b>                                                                                                                                                                                                                                                                                              | 06/09/2019                                                   | <b>Fuel</b>                                              | Gasoline                            |                       |                       |                                                          |                                                           |                  |    |
| <b>Fuel Batch ID</b>                                                                                                                                                                                                                                                                                          | 19E-02                                                       | <b>Fuel Calibration Number</b>                           | 1                                   |                       |                       |                                                          |                                                           |                  |    |
| <b>Vehicle Class</b>                                                                                                                                                                                                                                                                                          | N/A                                                          | <b>DF Type</b>                                           | Mfr. Determined                     |                       |                       |                                                          |                                                           |                  |    |
| <b>Verify Test Lab ID</b>                                                                                                                                                                                                                                                                                     | 772-1, Jangduck-Dong                                         |                                                          |                                     |                       |                       |                                                          |                                                           |                  |    |
| <b>E10 Evaporative Test Measurement Method</b>                                                                                                                                                                                                                                                                | Calculated (1.08 x FID Total Hydrocarbons)                   |                                                          |                                     |                       |                       |                                                          |                                                           |                  |    |
| <b>Test Start Odometer Reading</b>                                                                                                                                                                                                                                                                            | 4754                                                         | <b>Odometer Units</b>                                    | M                                   |                       |                       |                                                          |                                                           |                  |    |
| <b>4WD Test Dyno</b>                                                                                                                                                                                                                                                                                          | No                                                           | <b>Diesel Adjustment Factor Usage</b>                    | --                                  |                       |                       |                                                          |                                                           |                  |    |
| <b>State of Charge Delta</b>                                                                                                                                                                                                                                                                                  | --                                                           |                                                          |                                     |                       |                       |                                                          |                                                           |                  |    |
| <b>Drive Cycle Speed Tolerance Criteria</b>                                                                                                                                                                                                                                                                   | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)                    | <b>Road Speed Fan Usage</b>                              | No                                  |                       |                       |                                                          |                                                           |                  |    |
| <b>Test Results</b>                                                                                                                                                                                                                                                                                           |                                                              |                                                          |                                     |                       |                       |                                                          |                                                           |                  |    |
| <table border="1"> <thead> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated FE Equivalent Value (miles per gallon)</th> </tr> </thead> <tbody> <tr> <td>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</td> <td>0.1858</td> <td>--</td> </tr> </tbody> </table> |                                                              |                                                          |                                     | Test Result Name      | Unrounded Test Result | Verify Calculated FE Equivalent Value (miles per gallon) | HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only) | 0.1858           | -- |
| Test Result Name                                                                                                                                                                                                                                                                                              | Unrounded Test Result                                        | Verify Calculated FE Equivalent Value (miles per gallon) |                                     |                       |                       |                                                          |                                                           |                  |    |
| HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)                                                                                                                                                                                                                                                     | 0.1858                                                       | --                                                       |                                     |                       |                       |                                                          |                                                           |                  |    |
| <b>Manufacturer Test Comments</b>                                                                                                                                                                                                                                                                             |                                                              |                                                          |                                     |                       |                       |                                                          |                                                           |                  |    |
| 20MY DN8a 2.5L 16" Tire w/Stop&Start (ETW:3375) - 3Day EVAP                                                                                                                                                                                                                                                   |                                                              |                                                          |                                     |                       |                       |                                                          |                                                           |                  |    |
| <b>Certification Region</b>                                                                                                                                                                                                                                                                                   | <b>Useful Life</b>                                           | <b>Standard Level</b>                                    | <b>Emission Name</b>                | <b>Rounded Result</b> | <b>Add DF</b>         | <b>Certification Level</b>                               | <b>Standard</b>                                           | <b>Pass/Fail</b> |    |
| Fed                                                                                                                                                                                                                                                                                                           | 150,000 miles                                                | Federal Tier 3 Evap                                      | HC-TOTAL-EQUIV                      | 0.1858                | 0                     | 0.186                                                    | 0.300                                                     | Pass             |    |
| CA                                                                                                                                                                                                                                                                                                            | 150,000 miles                                                | California LEV-IV Zero Evap (Option 2)                   | HC-TOTAL-EQUIV                      | 0.1858                | 0                     | 0.186                                                    | 0.300                                                     | Pass             |    |

## Certification Summary Information Report

| Test Group                                     | VKMXV02.5DR3                               | Evaporative/Refueling Family          | VKMXR0131DRG                           |
|------------------------------------------------|--------------------------------------------|---------------------------------------|----------------------------------------|
| <b>Test #</b>                                  | <b>LHYX91004432</b>                        | <b>Test Procedure</b>                 | <b>27 - California fuel 2-day evap</b> |
| <b>Exhaust Test # for this Evap Test</b>       | LHYX91004427                               | <b>Test Fuel Type</b>                 | 46 - CARB LEV3 E10 Regular             |
| <b>Test Date</b>                               | 08/23/2019                                 | <b>Fuel</b>                           | Gasoline                               |
| <b>Fuel Batch ID</b>                           | 26757                                      | <b>Fuel Calibration Number</b>        | 1                                      |
| <b>Vehicle Class</b>                           | N/A                                        | <b>DF Type</b>                        | Mfr. Determined                        |
| <b>Verify Test Lab ID</b>                      | --                                         |                                       |                                        |
| <b>E10 Evaporative Test Measurement Method</b> | Calculated (1.08 x FID Total Hydrocarbons) |                                       |                                        |
| <b>Test Start Odometer Reading</b>             | 5084                                       | <b>Odometer Units</b>                 | M                                      |
| <b>4WD Test Dyno</b>                           | No                                         | <b>Diesel Adjustment Factor Usage</b> | --                                     |
| <b>State of Charge Delta</b>                   | --                                         |                                       |                                        |
| <b>Drive Cycle Speed Tolerance Criteria</b>    | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)  | <b>Road Speed Fan Usage</b>           | No                                     |

## Test Results

| Test Result Name                                          | Unrounded Test Result | Verify Calculated FE Equivalent Value |
|-----------------------------------------------------------|-----------------------|---------------------------------------|
| HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only) | 0.203123              | --                                    |

## Manufacturer Test Comments

Hot\_Soak\_HC\_(g) = 0.025568, Diurnal (gHC) = 0.177555

| Certification Region | Useful Life   | Standard Level                         | Emission Name  | Rounded Result | Add DF | Certification Level | Standard | Pass/Fail |
|----------------------|---------------|----------------------------------------|----------------|----------------|--------|---------------------|----------|-----------|
| Fed                  | 150,000 miles | Federal Tier 3 Evap                    | HC-TOTAL-EQUIV | 0.2031         | 0      | 0.203               | 0.300    | Pass      |
| CA                   | 150,000 miles | California LEV-IV Zero Evap (Option 2) | HC-TOTAL-EQUIV | 0.2031         | 0      | 0.203               | 0.300    | Pass      |

## Certification Summary Information Report

| <b>Test Group</b>                                                                                                                                                                                                                                                          | VKMXV02.5DR3                               | <b>Evaporative/Refueling Family</b>                      | VKMXR0131DRG                             |                       |                       |                                                          |                                                           |                  |    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------------|------------------------------------------|-----------------------|-----------------------|----------------------------------------------------------|-----------------------------------------------------------|------------------|----|
| <b>Test #</b>                                                                                                                                                                                                                                                              | <b>LHYX10059886</b>                        | <b>Test Procedure</b>                                    | <b>37 - California Fuel Running Loss</b> |                       |                       |                                                          |                                                           |                  |    |
| <b>Exhaust Test # for this Evap Test</b>                                                                                                                                                                                                                                   | LHYX10059882                               | <b>Test Fuel Type</b>                                    | 46 - CARB LEV3 E10 Regular Gasoline      |                       |                       |                                                          |                                                           |                  |    |
| <b>Test Date</b>                                                                                                                                                                                                                                                           | 06/09/2019                                 | <b>Fuel</b>                                              | Gasoline                                 |                       |                       |                                                          |                                                           |                  |    |
| <b>Fuel Batch ID</b>                                                                                                                                                                                                                                                       | 19E-02                                     | <b>Fuel Calibration Number</b>                           | 1                                        |                       |                       |                                                          |                                                           |                  |    |
| <b>Vehicle Class</b>                                                                                                                                                                                                                                                       | N/A                                        | <b>DF Type</b>                                           | Mfr. Determined                          |                       |                       |                                                          |                                                           |                  |    |
| <b>Verify Test Lab ID</b>                                                                                                                                                                                                                                                  | 772-1, Jangduck-Dong                       |                                                          |                                          |                       |                       |                                                          |                                                           |                  |    |
| <b>E10 Evaporative Test Measurement Method</b>                                                                                                                                                                                                                             | Calculated (1.08 x FID Total Hydrocarbons) |                                                          |                                          |                       |                       |                                                          |                                                           |                  |    |
| <b>Test Start Odometer Reading</b>                                                                                                                                                                                                                                         | 4754                                       | <b>Odometer Units</b>                                    | M                                        |                       |                       |                                                          |                                                           |                  |    |
| <b>4WD Test Dyno</b>                                                                                                                                                                                                                                                       | No                                         | <b>Diesel Adjustment Factor Usage</b>                    | --                                       |                       |                       |                                                          |                                                           |                  |    |
| <b>State of Charge Delta</b>                                                                                                                                                                                                                                               | --                                         |                                                          |                                          |                       |                       |                                                          |                                                           |                  |    |
| <b>Drive Cycle Speed Tolerance Criteria</b>                                                                                                                                                                                                                                | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)  | <b>Road Speed Fan Usage</b>                              | No                                       |                       |                       |                                                          |                                                           |                  |    |
| <b>Test Results</b>                                                                                                                                                                                                                                                        |                                            |                                                          |                                          |                       |                       |                                                          |                                                           |                  |    |
| <table border="1"> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated FE Equivalent Value (miles per gallon)</th> </tr> <tr> <td>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</td> <td>0.006</td> <td>--</td> </tr> </table> |                                            |                                                          |                                          | Test Result Name      | Unrounded Test Result | Verify Calculated FE Equivalent Value (miles per gallon) | HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only) | 0.006            | -- |
| Test Result Name                                                                                                                                                                                                                                                           | Unrounded Test Result                      | Verify Calculated FE Equivalent Value (miles per gallon) |                                          |                       |                       |                                                          |                                                           |                  |    |
| HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)                                                                                                                                                                                                                  | 0.006                                      | --                                                       |                                          |                       |                       |                                                          |                                                           |                  |    |
| <b>Manufacturer Test Comments</b>                                                                                                                                                                                                                                          |                                            |                                                          |                                          |                       |                       |                                                          |                                                           |                  |    |
| 20MY DN8a 2.5L 16" Tire w/Stop&Start(ETW:3375) - Running Loss                                                                                                                                                                                                              |                                            |                                                          |                                          |                       |                       |                                                          |                                                           |                  |    |
| <b>Certification Region</b>                                                                                                                                                                                                                                                | <b>Useful Life</b>                         | <b>Standard Level</b>                                    | <b>Emission Name</b>                     | <b>Rounded Result</b> | <b>Add DF</b>         | <b>Certification Level</b>                               | <b>Standard</b>                                           | <b>Pass/Fail</b> |    |
| Fed                                                                                                                                                                                                                                                                        | 150,000 miles                              | Federal Tier 3 Evap                                      | HC-TOTAL-EQUIV                           | 0.006                 | 0                     | 0.01                                                     | 0.05                                                      | Pass             |    |
| CA                                                                                                                                                                                                                                                                         | 150,000 miles                              | California LEV-IV Zero Evap (Option 2)                   | HC-TOTAL-EQUIV                           | 0.006                 | 0                     | 0.01                                                     | 0.01                                                      | Pass             |    |

## Certification Summary Information Report

| <b>Test Group</b>                                                                                                                                                                                                                                                          | VKMXV02.5DR3                               | <b>Evaporative/Refueling Family</b>                      | VKMXR0131DRG                                       |                       |                       |                                                          |                                                           |                  |    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------------|----------------------------------------------------|-----------------------|-----------------------|----------------------------------------------------------|-----------------------------------------------------------|------------------|----|
| <b>Test #</b>                                                                                                                                                                                                                                                              | <b>LHYX10059888</b>                        | <b>Test Procedure</b>                                    | <b>24 - Federal fuel refueling test (ORVR)</b>     |                       |                       |                                                          |                                                           |                  |    |
| <b>Exhaust Test # for this Evap Test</b>                                                                                                                                                                                                                                   | LHYX10059884                               | <b>Test Fuel Type</b>                                    | 48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.) |                       |                       |                                                          |                                                           |                  |    |
| <b>Test Date</b>                                                                                                                                                                                                                                                           | 06/15/2019                                 | <b>Fuel</b>                                              | Gasoline                                           |                       |                       |                                                          |                                                           |                  |    |
| <b>Fuel Batch ID</b>                                                                                                                                                                                                                                                       | 18T-03                                     | <b>Fuel Calibration Number</b>                           | 1                                                  |                       |                       |                                                          |                                                           |                  |    |
| <b>Vehicle Class</b>                                                                                                                                                                                                                                                       | N/A                                        | <b>DF Type</b>                                           | Mfr. Determined                                    |                       |                       |                                                          |                                                           |                  |    |
| <b>Verify Test Lab ID</b>                                                                                                                                                                                                                                                  | 772-1, Jangduck-Dong                       |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <b>E10 Evaporative Test Measurement Method</b>                                                                                                                                                                                                                             | Calculated (1.08 x FID Total Hydrocarbons) |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <b>Test Start Odometer Reading</b>                                                                                                                                                                                                                                         | 4820                                       | <b>Odometer Units</b>                                    | M                                                  |                       |                       |                                                          |                                                           |                  |    |
| <b>4WD Test Dyno</b>                                                                                                                                                                                                                                                       | No                                         | <b>Diesel Adjustment Factor Usage</b>                    | --                                                 |                       |                       |                                                          |                                                           |                  |    |
| <b>State of Charge Delta</b>                                                                                                                                                                                                                                               | --                                         |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <b>Drive Cycle Speed Tolerance Criteria</b>                                                                                                                                                                                                                                | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)  | <b>Road Speed Fan Usage</b>                              | No                                                 |                       |                       |                                                          |                                                           |                  |    |
| <b>Test Results</b>                                                                                                                                                                                                                                                        |                                            |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <table border="1"> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated FE Equivalent Value (miles per gallon)</th> </tr> <tr> <td>HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)</td> <td>0.012</td> <td>--</td> </tr> </table> |                                            |                                                          |                                                    | Test Result Name      | Unrounded Test Result | Verify Calculated FE Equivalent Value (miles per gallon) | HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only) | 0.012            | -- |
| Test Result Name                                                                                                                                                                                                                                                           | Unrounded Test Result                      | Verify Calculated FE Equivalent Value (miles per gallon) |                                                    |                       |                       |                                                          |                                                           |                  |    |
| HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)                                                                                                                                                                                                                  | 0.012                                      | --                                                       |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <b>Manufacturer Test Comments</b>                                                                                                                                                                                                                                          |                                            |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| 20MY DN8a 2.5L 16" Tire w/Stop&Start(ETW:3375) - ORVR                                                                                                                                                                                                                      |                                            |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <b>Certification Region</b>                                                                                                                                                                                                                                                | <b>Useful Life</b>                         | <b>Standard Level</b>                                    | <b>Emission Name</b>                               | <b>Rounded Result</b> | <b>Add DF</b>         | <b>Certification Level</b>                               | <b>Standard</b>                                           | <b>Pass/Fail</b> |    |
| Fed                                                                                                                                                                                                                                                                        | 150,000 miles                              | Federal Tier 3 Evap                                      | HC-TOTAL-EQUIV                                     | 0.012                 | 0                     | 0.01                                                     | 0.20                                                      | Pass             |    |
| CA                                                                                                                                                                                                                                                                         | 150,000 miles                              | California LEV-IV Zero Evap (Option 2)                   | HC-TOTAL-EQUIV                                     | 0.012                 | 0                     | 0.01                                                     | 0.20                                                      | Pass             |    |

Certification Summary Information Report

|                                         |                                            |                                |                                     |
|-----------------------------------------|--------------------------------------------|--------------------------------|-------------------------------------|
| Test Group                              | VKMXV02.5DR3                               | Evaporative/Refueling Family   | VKMXR0131DRG                        |
| Test #                                  | LHYX10059885                               | Test Procedure                 | 65 - Evap Canister Bleed Test       |
| Exhaust Test # for this Evap Test       | --                                         | Test Fuel Type                 | 46 - CARB LEV3 E10 Regular Gasoline |
| Test Date                               | 04/24/2019                                 | Fuel                           | Gasoline                            |
| Fuel Batch ID                           | 19E-02                                     | Fuel Calibration Number        | 1                                   |
| Vehicle Class                           | N/A                                        | DF Type                        | Mfr. Determined                     |
| Verify Test Lab ID                      | 772-1, Jangduck-Dong                       |                                |                                     |
| E10 Evaporative Test Measurement Method | Calculated (1.08 x FID Total Hydrocarbons) |                                |                                     |
| Test Start Odometer Reading             | 4822                                       | Odometer Units                 | M                                   |
| 4WD Test Dyno                           | No                                         | Diesel Adjustment Factor Usage | --                                  |
| State of Charge Delta                   | --                                         |                                |                                     |
| Drive Cycle Speed Tolerance Criteria    | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)  | Road Speed Fan Usage           | No                                  |

Test Results

| Test Result Name             | Unrounded Test Result | Verify Calculated FE Equivalent Value (miles per gallon) |
|------------------------------|-----------------------|----------------------------------------------------------|
| HC-TOTAL (Total Hydrocarbon) | 0.004                 | --                                                       |

Manufacturer Test Comments20MY DN8a 2.5L 16" Tire w/Stop&Start(ETW:3375) - Canister Bleed

| Certification Region | Useful Life   | Standard Level                         | Emission Name | Rounded Result | Add DF | Certification Level | Standard | Pass/Fail |
|----------------------|---------------|----------------------------------------|---------------|----------------|--------|---------------------|----------|-----------|
| Fed                  | 150,000 miles | Federal Tier 3 Evap                    | HC-TOTAL      | 0.0040         | 0      | 0.004               | 0.020    | Pass      |
| CA                   | 150,000 miles | California LEV-IV Zero Evap (Option 2) | HC-TOTAL      | 0.0040         | 0      | 0.004               | 0.020    | Pass      |

## Certification Summary Information Report

|                                                                                                                                                                                                                                                                   |                                           |                                              |                                                    |                         |                              |                                              |                                                    |                  |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------|----------------------------------------------------|-------------------------|------------------------------|----------------------------------------------|----------------------------------------------------|------------------|----|
| <b>Test Group</b>                                                                                                                                                                                                                                                 | VKMXV02.5DR3                              | <b>Evaporative/Refueling Family</b>          | VKMXR0131DRG                                       |                         |                              |                                              |                                                    |                  |    |
| <b>Test #</b>                                                                                                                                                                                                                                                     | <b>LHYX10059889</b>                       | <b>Test Procedure</b>                        | <b>68 - Leak Test - Port Near Fuel Pipe</b>        |                         |                              |                                              |                                                    |                  |    |
| <b>Exhaust Test # for this Evap Test</b>                                                                                                                                                                                                                          | --                                        | <b>Test Fuel Type</b>                        | 48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.) |                         |                              |                                              |                                                    |                  |    |
| <b>Test Date</b>                                                                                                                                                                                                                                                  | 06/15/2019                                | <b>Fuel</b>                                  | Gasoline                                           |                         |                              |                                              |                                                    |                  |    |
| <b>Fuel Batch ID</b>                                                                                                                                                                                                                                              | 18T-03                                    | <b>Fuel Calibration Number</b>               | 1                                                  |                         |                              |                                              |                                                    |                  |    |
| <b>Vehicle Class</b>                                                                                                                                                                                                                                              | N/A                                       | <b>DF Type</b>                               | Mfr. Determined                                    |                         |                              |                                              |                                                    |                  |    |
| <b>Verify Test Lab ID</b>                                                                                                                                                                                                                                         | 772-1, Jangduck-Dong                      |                                              |                                                    |                         |                              |                                              |                                                    |                  |    |
| <b>E10 Evaporative Test Measurement Method</b>                                                                                                                                                                                                                    | --                                        |                                              |                                                    |                         |                              |                                              |                                                    |                  |    |
| <b>Test Start Odometer Reading</b>                                                                                                                                                                                                                                | 4822                                      | <b>Odometer Units</b>                        | M                                                  |                         |                              |                                              |                                                    |                  |    |
| <b>4WD Test Dyno</b>                                                                                                                                                                                                                                              | No                                        | <b>Diesel Adjustment Factor Usage</b>        | --                                                 |                         |                              |                                              |                                                    |                  |    |
| <b>State of Charge Delta</b>                                                                                                                                                                                                                                      | --                                        |                                              |                                                    |                         |                              |                                              |                                                    |                  |    |
| <b>Drive Cycle Speed Tolerance Criteria</b>                                                                                                                                                                                                                       | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec) | <b>Road Speed Fan Usage</b>                  | No                                                 |                         |                              |                                              |                                                    |                  |    |
| <b>Test Results</b>                                                                                                                                                                                                                                               |                                           |                                              |                                                    |                         |                              |                                              |                                                    |                  |    |
| <table border="1"> <tr> <td><b>Test Result Name</b></td> <td><b>Unrounded Test Result</b></td> <td><b>Verify Calculated FE Equivalent Value</b></td> </tr> <tr> <td><b>LEAK-DIA (Effective Leak Diameter (inches))</b></td> <td>0</td> <td>--</td> </tr> </table> |                                           |                                              |                                                    | <b>Test Result Name</b> | <b>Unrounded Test Result</b> | <b>Verify Calculated FE Equivalent Value</b> | <b>LEAK-DIA (Effective Leak Diameter (inches))</b> | 0                | -- |
| <b>Test Result Name</b>                                                                                                                                                                                                                                           | <b>Unrounded Test Result</b>              | <b>Verify Calculated FE Equivalent Value</b> |                                                    |                         |                              |                                              |                                                    |                  |    |
| <b>LEAK-DIA (Effective Leak Diameter (inches))</b>                                                                                                                                                                                                                | 0                                         | --                                           |                                                    |                         |                              |                                              |                                                    |                  |    |
| <b>Manufacturer Test Comments</b>                                                                                                                                                                                                                                 |                                           |                                              |                                                    |                         |                              |                                              |                                                    |                  |    |
| 20MY DN8a 2.5L 16" Tire w/Stop&Start(ETW:3375) - Leak Test Port Near Fuel Pipe                                                                                                                                                                                    |                                           |                                              |                                                    |                         |                              |                                              |                                                    |                  |    |
| <b>Certification Region</b>                                                                                                                                                                                                                                       | <b>Useful Life</b>                        | <b>Standard Level</b>                        | <b>Emission Name</b>                               | <b>Rounded Result</b>   | <b>Add DF</b>                | <b>Certification Level</b>                   | <b>Standard</b>                                    | <b>Pass/Fail</b> |    |
| Fed                                                                                                                                                                                                                                                               | 150,000 miles                             | Federal Tier 3 Evap                          | LEAK-DIA                                           | 0.0000                  | 0                            | 0.000                                        | 0.020                                              | Pass             |    |
| CA                                                                                                                                                                                                                                                                | 150,000 miles                             | California LEV-IV Zero Evap (Option 2)       | LEAK-DIA                                           | 0.000                   | 0                            | 0.00                                         | 0.02                                               | Pass             |    |

## Certification Summary Information Report

| Test Group                                                                                                                                                                                                                                                              | VKMXV02.5DR3                              | Evaporative/Refueling Family           | VKMXR0131DRG                                       |                       |                       |                                       |                                             |                  |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------|----------------------------------------------------|-----------------------|-----------------------|---------------------------------------|---------------------------------------------|------------------|----|
| <b>Test #</b>                                                                                                                                                                                                                                                           | <b>LHYX10059891</b>                       | <b>Test Procedure</b>                  | <b>67 - Leak Test - Port Near Canister</b>         |                       |                       |                                       |                                             |                  |    |
| <b>Exhaust Test # for this Evap Test</b>                                                                                                                                                                                                                                | --                                        | <b>Test Fuel Type</b>                  | 48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.) |                       |                       |                                       |                                             |                  |    |
| <b>Test Date</b>                                                                                                                                                                                                                                                        | 06/15/2019                                | <b>Fuel</b>                            | Gasoline                                           |                       |                       |                                       |                                             |                  |    |
| <b>Fuel Batch ID</b>                                                                                                                                                                                                                                                    | 18T-03                                    | <b>Fuel Calibration Number</b>         | 1                                                  |                       |                       |                                       |                                             |                  |    |
| <b>Vehicle Class</b>                                                                                                                                                                                                                                                    | N/A                                       | <b>DF Type</b>                         | Mfr. Determined                                    |                       |                       |                                       |                                             |                  |    |
| <b>Verify Test Lab ID</b>                                                                                                                                                                                                                                               | 772-1, Jangduck-Dong                      |                                        |                                                    |                       |                       |                                       |                                             |                  |    |
| <b>E10 Evaporative Test Measurement Method</b>                                                                                                                                                                                                                          | --                                        |                                        |                                                    |                       |                       |                                       |                                             |                  |    |
| <b>Test Start Odometer Reading</b>                                                                                                                                                                                                                                      | 4822                                      | <b>Odometer Units</b>                  | M                                                  |                       |                       |                                       |                                             |                  |    |
| <b>4WD Test Dyno</b>                                                                                                                                                                                                                                                    | No                                        | <b>Diesel Adjustment Factor Usage</b>  | --                                                 |                       |                       |                                       |                                             |                  |    |
| <b>State of Charge Delta</b>                                                                                                                                                                                                                                            | --                                        |                                        |                                                    |                       |                       |                                       |                                             |                  |    |
| <b>Drive Cycle Speed Tolerance Criteria</b>                                                                                                                                                                                                                             | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec) | <b>Road Speed Fan Usage</b>            | No                                                 |                       |                       |                                       |                                             |                  |    |
| <b>Test Results</b>                                                                                                                                                                                                                                                     |                                           |                                        |                                                    |                       |                       |                                       |                                             |                  |    |
| <table border="1"> <thead> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated FE Equivalent Value</th> </tr> </thead> <tbody> <tr> <td>LEAK-DIA (Effective Leak Diameter (inches))</td> <td>0</td> <td>--</td> </tr> </tbody> </table> |                                           |                                        |                                                    | Test Result Name      | Unrounded Test Result | Verify Calculated FE Equivalent Value | LEAK-DIA (Effective Leak Diameter (inches)) | 0                | -- |
| Test Result Name                                                                                                                                                                                                                                                        | Unrounded Test Result                     | Verify Calculated FE Equivalent Value  |                                                    |                       |                       |                                       |                                             |                  |    |
| LEAK-DIA (Effective Leak Diameter (inches))                                                                                                                                                                                                                             | 0                                         | --                                     |                                                    |                       |                       |                                       |                                             |                  |    |
| <b>Manufacturer Test Comments</b>                                                                                                                                                                                                                                       |                                           |                                        |                                                    |                       |                       |                                       |                                             |                  |    |
| 20MY DN8a 2.5L 16" Tire w/Stop&Start(ETW:3375) - Leak Test Port Near Canister                                                                                                                                                                                           |                                           |                                        |                                                    |                       |                       |                                       |                                             |                  |    |
| <b>Certification Region</b>                                                                                                                                                                                                                                             | <b>Useful Life</b>                        | <b>Standard Level</b>                  | <b>Emission Name</b>                               | <b>Rounded Result</b> | <b>Add DF</b>         | <b>Certification Level</b>            | <b>Standard</b>                             | <b>Pass/Fail</b> |    |
| Fed                                                                                                                                                                                                                                                                     | 150,000 miles                             | Federal Tier 3 Evap                    | LEAK-DIA                                           | 0.0000                | 0                     | 0.000                                 | 0.020                                       | Pass             |    |
| CA                                                                                                                                                                                                                                                                      | 150,000 miles                             | California LEV-IV Zero Evap (Option 2) | LEAK-DIA                                           | 0.000                 | 0                     | 0.00                                  | 0.02                                        | Pass             |    |

## Certification Summary Information Report

| <b>Test Group</b>                            | VKMXV02.5DR3                                                                                                                                                            | <b>Evaporative/Refueling Family</b>                   | VKMXR0131DRG         |      |   |                   |          |  |  |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|----------------------|------|---|-------------------|----------|--|--|
| <b>Emission Data Vehicle Information</b>     |                                                                                                                                                                         |                                                       |                      |      |   |                   |          |  |  |
| <b>Vehicle ID / Configuration</b>            | DL3U7H5GA110A / 0                                                                                                                                                       | <b>Manufacturer Vehicle Configuration Number</b>      | 0                    |      |   |                   |          |  |  |
| <b>Original Test Group Name</b>              | VKMXV02.5DR3                                                                                                                                                            | <b>Original Evaporative/Refueling Family</b>          | VKMXR0131DRG         |      |   |                   |          |  |  |
| <b>Original Test Vehicle Model Year</b>      | 2027                                                                                                                                                                    |                                                       |                      |      |   |                   |          |  |  |
| <b>Vehicle Model</b>                         |                                                                                                                                                                         |                                                       |                      |      |   |                   |          |  |  |
| <b>Represented Test Vehicle Make</b>         | Kia                                                                                                                                                                     | <b>Represented Test Vehicle Model</b>                 | K5                   |      |   |                   |          |  |  |
| <b>Leak Family Details</b>                   |                                                                                                                                                                         |                                                       |                      |      |   |                   |          |  |  |
| <b>Leak Family Identifier</b>                | DL3                                                                                                                                                                     | <b>Leak Family Name</b>                               | VKMXR0131DRG-DL3     |      |   |                   |          |  |  |
| <b>Drive Sources and Fuel System Details</b> |                                                                                                                                                                         |                                                       |                      |      |   |                   |          |  |  |
|                                              | <table border="1"> <tr> <th>Drive Source and Fuel#</th><th>Drive Source</th><th>Fuel</th></tr> <tr> <td>1</td><td>Combustion Engine</td><td>Gasoline</td></tr> </table> | Drive Source and Fuel#                                | Drive Source         | Fuel | 1 | Combustion Engine | Gasoline |  |  |
| Drive Source and Fuel#                       | Drive Source                                                                                                                                                            | Fuel                                                  |                      |      |   |                   |          |  |  |
| 1                                            | Combustion Engine                                                                                                                                                       | Gasoline                                              |                      |      |   |                   |          |  |  |
| <b>Hybrid Indicator</b>                      | No                                                                                                                                                                      |                                                       |                      |      |   |                   |          |  |  |
| <b>Multiple Fuel Storage</b>                 | --                                                                                                                                                                      | <b>Multiple Fuel Combustion</b>                       | --                   |      |   |                   |          |  |  |
| <b>Fuel Cell Indicator</b>                   | --                                                                                                                                                                      | <b>Rechargeable Energy Storage System Indicator</b>   | --                   |      |   |                   |          |  |  |
| <b>Rechargeable Energy Storage System</b>    | --                                                                                                                                                                      | <b>Rechargeable Energy Storage System, if 'Other'</b> | --                   |      |   |                   |          |  |  |
| <b>Off-board charge Capable Indicator</b>    | --                                                                                                                                                                      |                                                       |                      |      |   |                   |          |  |  |
| <b>Odometer Correction -- Initial</b>        | 0                                                                                                                                                                       | <b>Odometer Correction Factor</b>                     | 1.008                |      |   |                   |          |  |  |
| <b>Odometer Correction Sign</b>              | - = System Miles is equal to (Test odometer reading - Initial system miles) * Correction factor                                                                         |                                                       |                      |      |   |                   |          |  |  |
| <b>Odometer Correction Units</b>             | Miles                                                                                                                                                                   |                                                       |                      |      |   |                   |          |  |  |
| <b>Engine Code</b>                           | G4KN-AC                                                                                                                                                                 | <b>Rated Horsepower</b>                               | 186                  |      |   |                   |          |  |  |
| <b>Displacement (liters)</b>                 | 2.5                                                                                                                                                                     |                                                       |                      |      |   |                   |          |  |  |
| <b>Air Aspiration Method</b>                 | Naturally Aspirated                                                                                                                                                     | <b>Air Aspiration Method, if 'Other'</b>              |                      |      |   |                   |          |  |  |
| <b>Number of Air Aspiration Devices</b>      | --                                                                                                                                                                      | <b>Air Aspiration Device Configuration</b>            | --                   |      |   |                   |          |  |  |
| <b>Charge Air Cooler Type</b>                | --                                                                                                                                                                      | <b>Drive Mode While Testing</b>                       | 2-Wheel Drive, Front |      |   |                   |          |  |  |
| <b>Shift Indicator Light Usage</b>           | Not equipped                                                                                                                                                            | <b>Aged Emission Components</b>                       | 4,000 (mi)           |      |   |                   |          |  |  |
| <b>Curb Weight (lbs)</b>                     | 3543                                                                                                                                                                    | <b>Equivalent Test Weight (pounds)</b>                | 3875                 |      |   |                   |          |  |  |
| <b>GVWR (lbs)</b>                            | 4519                                                                                                                                                                    | <b>N/V Ratio</b>                                      | 26.8                 |      |   |                   |          |  |  |
| <b>Axle Ratio</b>                            | 3.2                                                                                                                                                                     |                                                       |                      |      |   |                   |          |  |  |
| <b>Transmission Type</b>                     | Semi-Automatic                                                                                                                                                          | <b># of Transmission Gears</b>                        | 8                    |      |   |                   |          |  |  |
| <b>Transmission Lockup</b>                   | Yes                                                                                                                                                                     | <b>Creep Gear</b>                                     | No                   |      |   |                   |          |  |  |

Certification Summary Information Report

|                                    |         |                                |                |                  |                              |                |                                                                                  |  |
|------------------------------------|---------|--------------------------------|----------------|------------------|------------------------------|----------------|----------------------------------------------------------------------------------|--|
| Test Group                         |         | VKMXV02.5DR3                   |                |                  | Evaporative/Refueling Family |                | VKMXR0131DRG                                                                     |  |
| Dynamometer Coefficients:          |         |                                |                |                  |                              |                |                                                                                  |  |
| Target Coefficients                |         |                                |                | Set Coefficients |                              |                | EPA Calculated Total Road Load Horse Power for<br>City/Highway/Evap Coefficients |  |
| Coefficient<br>Category            | A (lbf) | B (lbf/mph)                    | C (lbf/mph**2) | A (lbf)          | B (lbf/mph)                  | C (lbf/mph**2) |                                                                                  |  |
| City/Highway/Evap                  | 37.642  | 0.14052                        | 0.018712       | 19.828           | -0.01883                     | 0.019507       | 12.2                                                                             |  |
| Cold CO                            | 41.406  | 0.15457                        | 0.01816        | 13.075           | -0.01199                     | 0.021016       | N/A                                                                              |  |
| US06                               | 37.642  | 0.14052                        | 0.018712       | 19.828           | -0.01883                     | 0.019507       | N/A                                                                              |  |
| Emission Control Device Comments   |         | --                             |                |                  |                              |                |                                                                                  |  |
| Manufacturer Test Vehicle Comments |         | 27MY DL3 PE 2.5 GPF 8AT 18inch |                |                  |                              |                |                                                                                  |  |

## Certification Summary Information Report

| Test Group                                     | VKMXV02.5DR3                              | Evaporative/Refueling Family          | VKMXR0131DRG                               |
|------------------------------------------------|-------------------------------------------|---------------------------------------|--------------------------------------------|
| <b>Test #</b>                                  | <b>VKMX10092925</b>                       | <b>Test Procedure</b>                 | <b>11 - Cold CO</b>                        |
| <b>Exhaust Test # for this Evap Test</b>       | --                                        | <b>Test Fuel Type</b>                 | 28 - Cold CO E10 Regular Gasoline (Tier 3) |
| <b>Test Date</b>                               | 12/11/2025                                | <b>Fuel</b>                           | Gasoline                                   |
| <b>Fuel Batch ID</b>                           | 25D-02                                    | <b>Fuel Calibration Number</b>        | 1                                          |
| <b>Vehicle Class</b>                           | LDV/Passenger Car                         | <b>DF Type</b>                        | Mfr. Determined                            |
| <b>Verify Test Lab ID</b>                      | 772-1, Jangduck-Dong                      |                                       |                                            |
| <b>E10 Evaporative Test Measurement Method</b> | --                                        |                                       |                                            |
| <b>Test Start Odometer Reading</b>             | 4273                                      | <b>Odometer Units</b>                 | M                                          |
| <b>4WD Test Dyno</b>                           | No                                        | <b>Diesel Adjustment Factor Usage</b> | --                                         |
| <b>State of Charge Delta</b>                   | --                                        |                                       |                                            |
| <b>Drive Cycle Speed Tolerance Criteria</b>    | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec) | <b>Road Speed Fan Usage</b>           | Yes                                        |
| <b>Test Results</b>                            |                                           |                                       |                                            |

## Certification Summary Information Report

| Test Group                 | VKMXV02.5DR3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Evaporative/Refueling Family                                                                                                                                         | VKMXR0131DRG                                             |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|----------------------------------|----------------|-----|----------------------------------|------|----|-------------------------------|------|------|---------------------------|-------|----|----------------------------------------------|-------|----|----------------------------------|-----|----|----------------------------------|------|----|-------------------------------|------|------|---------------------------|-------|----|----------------------------------------------|---|----|----------------------------------|-----|----|----------------------------------|------|----|-------------------------------|------|------|---------------------------|-------|----|----------------------------------------------|---|----|-------------------------|------|----|----------------------|------|----|----------------------------------------------------|------|----|--------------------------------------------|------|----|-------------------------------------------------|------|----|------------------------------------|------|------|---------------------------------|-------|----|----------------------------------|------|----|------------------------------|-------|----|--|--|
|                            | <table><tr><th>Test Result Name</th><th>Unrounded Test Result</th><th>Verify Calculated FE Equivalent Value (miles per gallon)</th></tr><tr><td>CO2 BAG 1 (Bag 1 Carbon Dioxide)</td><td>376</td><td>--</td></tr><tr><td>CO BAG 1 (Bag 1 Carbon Monoxide)</td><td>2.32</td><td>--</td></tr><tr><td>FE BAG 1 (Bag 1 Fuel Economy)</td><td>22.7</td><td>22.7</td></tr><tr><td>CH4 BAG 1 (Bag 1 Methane)</td><td>0.041</td><td>--</td></tr><tr><td>NMOG BAG 1 (Bag 1 Non-methane organic gases)</td><td>0.193</td><td>--</td></tr><tr><td>CO2 BAG 2 (Bag 2 Carbon Dioxide)</td><td>347</td><td>--</td></tr><tr><td>CO BAG 2 (Bag 2 Carbon Monoxide)</td><td>0.04</td><td>--</td></tr><tr><td>FE BAG 2 (Bag 2 Fuel Economy)</td><td>24.9</td><td>24.9</td></tr><tr><td>CH4 BAG 2 (Bag 2 Methane)</td><td>0.002</td><td>--</td></tr><tr><td>NMOG BAG 2 (Bag 2 Non-methane organic gases)</td><td>0</td><td>--</td></tr><tr><td>CO2 BAG 3 (Bag 3 Carbon Dioxide)</td><td>284</td><td>--</td></tr><tr><td>CO BAG 3 (Bag 3 Carbon Monoxide)</td><td>0.04</td><td>--</td></tr><tr><td>FE BAG 3 (Bag 3 Fuel Economy)</td><td>30.4</td><td>30.4</td></tr><tr><td>CH4 BAG 3 (Bag 3 Methane)</td><td>0.003</td><td>--</td></tr><tr><td>NMOG BAG 3 (Bag 3 Non-methane organic gases)</td><td>0</td><td>--</td></tr><tr><td>METHANE (CH4 - Methane)</td><td>0.01</td><td>--</td></tr><tr><td>CO (Carbon Monoxide)</td><td>0.51</td><td>--</td></tr><tr><td>DT-ASCR (Drive Trace Absolute Speed Change Rating)</td><td>1.08</td><td>--</td></tr><tr><td>DT-EER (Drive Trace Energy Economy Rating)</td><td>0.87</td><td>--</td></tr><tr><td>DT-IWRR (Drive Trace Inertia Work Ratio Rating)</td><td>1.61</td><td>--</td></tr><tr><td>MFR FE (Manufacturer Fuel Economy)</td><td>25.6</td><td>25.6</td></tr><tr><td>HC-NM (Non-methane Hydrocarbon)</td><td>0.036</td><td>--</td></tr><tr><td>NMOG (Non-methane organic gases)</td><td>0.04</td><td>--</td></tr><tr><td>HC-TOTAL (Total Hydrocarbon)</td><td>0.046</td><td>--</td></tr></table> | Test Result Name                                                                                                                                                     | Unrounded Test Result                                    | Verify Calculated FE Equivalent Value (miles per gallon) | CO2 BAG 1 (Bag 1 Carbon Dioxide) | 376            | --  | CO BAG 1 (Bag 1 Carbon Monoxide) | 2.32 | -- | FE BAG 1 (Bag 1 Fuel Economy) | 22.7 | 22.7 | CH4 BAG 1 (Bag 1 Methane) | 0.041 | -- | NMOG BAG 1 (Bag 1 Non-methane organic gases) | 0.193 | -- | CO2 BAG 2 (Bag 2 Carbon Dioxide) | 347 | -- | CO BAG 2 (Bag 2 Carbon Monoxide) | 0.04 | -- | FE BAG 2 (Bag 2 Fuel Economy) | 24.9 | 24.9 | CH4 BAG 2 (Bag 2 Methane) | 0.002 | -- | NMOG BAG 2 (Bag 2 Non-methane organic gases) | 0 | -- | CO2 BAG 3 (Bag 3 Carbon Dioxide) | 284 | -- | CO BAG 3 (Bag 3 Carbon Monoxide) | 0.04 | -- | FE BAG 3 (Bag 3 Fuel Economy) | 30.4 | 30.4 | CH4 BAG 3 (Bag 3 Methane) | 0.003 | -- | NMOG BAG 3 (Bag 3 Non-methane organic gases) | 0 | -- | METHANE (CH4 - Methane) | 0.01 | -- | CO (Carbon Monoxide) | 0.51 | -- | DT-ASCR (Drive Trace Absolute Speed Change Rating) | 1.08 | -- | DT-EER (Drive Trace Energy Economy Rating) | 0.87 | -- | DT-IWRR (Drive Trace Inertia Work Ratio Rating) | 1.61 | -- | MFR FE (Manufacturer Fuel Economy) | 25.6 | 25.6 | HC-NM (Non-methane Hydrocarbon) | 0.036 | -- | NMOG (Non-methane organic gases) | 0.04 | -- | HC-TOTAL (Total Hydrocarbon) | 0.046 | -- |  |  |
|                            | Test Result Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Unrounded Test Result                                                                                                                                                | Verify Calculated FE Equivalent Value (miles per gallon) |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | CO2 BAG 1 (Bag 1 Carbon Dioxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 376                                                                                                                                                                  | --                                                       |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | CO BAG 1 (Bag 1 Carbon Monoxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 2.32                                                                                                                                                                 | --                                                       |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | FE BAG 1 (Bag 1 Fuel Economy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 22.7                                                                                                                                                                 | 22.7                                                     |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | CH4 BAG 1 (Bag 1 Methane)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.041                                                                                                                                                                | --                                                       |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | NMOG BAG 1 (Bag 1 Non-methane organic gases)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.193                                                                                                                                                                | --                                                       |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | CO2 BAG 2 (Bag 2 Carbon Dioxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 347                                                                                                                                                                  | --                                                       |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | CO BAG 2 (Bag 2 Carbon Monoxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.04                                                                                                                                                                 | --                                                       |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | FE BAG 2 (Bag 2 Fuel Economy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 24.9                                                                                                                                                                 | 24.9                                                     |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | CH4 BAG 2 (Bag 2 Methane)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.002                                                                                                                                                                | --                                                       |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | NMOG BAG 2 (Bag 2 Non-methane organic gases)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0                                                                                                                                                                    | --                                                       |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | CO2 BAG 3 (Bag 3 Carbon Dioxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 284                                                                                                                                                                  | --                                                       |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | CO BAG 3 (Bag 3 Carbon Monoxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.04                                                                                                                                                                 | --                                                       |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | FE BAG 3 (Bag 3 Fuel Economy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 30.4                                                                                                                                                                 | 30.4                                                     |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | CH4 BAG 3 (Bag 3 Methane)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.003                                                                                                                                                                | --                                                       |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | NMOG BAG 3 (Bag 3 Non-methane organic gases)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0                                                                                                                                                                    | --                                                       |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | METHANE (CH4 - Methane)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.01                                                                                                                                                                 | --                                                       |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | CO (Carbon Monoxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.51                                                                                                                                                                 | --                                                       |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | DT-ASCR (Drive Trace Absolute Speed Change Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1.08                                                                                                                                                                 | --                                                       |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | DT-EER (Drive Trace Energy Economy Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.87                                                                                                                                                                 | --                                                       |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | DT-IWRR (Drive Trace Inertia Work Ratio Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1.61                                                                                                                                                                 | --                                                       |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | MFR FE (Manufacturer Fuel Economy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 25.6                                                                                                                                                                 | 25.6                                                     |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | HC-NM (Non-methane Hydrocarbon)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.036                                                                                                                                                                | --                                                       |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | NMOG (Non-methane organic gases)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.04                                                                                                                                                                 | --                                                       |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | HC-TOTAL (Total Hydrocarbon)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.046                                                                                                                                                                | --                                                       |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <table><tr><th>Test Result Name</th><th>Unrounded Test Result</th><th>Verify Calculated CO2</th></tr><tr><td>Carbon dioxide</td><td>336</td><td>--</td></tr></table> | Test Result Name                                         | Unrounded Test Result                                    | Verify Calculated CO2            | Carbon dioxide | 336 | --                               |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
|                            | Test Result Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Unrounded Test Result                                                                                                                                                | Verify Calculated CO2                                    |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
| Carbon dioxide             | 336                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | --                                                                                                                                                                   |                                                          |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |
| Manufacturer Test Comments | 27MY DL3 2.5 8AT AWD 18inch GPF (EDV) E10 20F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                      |                                                          |                                                          |                                  |                |     |                                  |      |    |                               |      |      |                           |       |    |                                              |       |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                                  |     |    |                                  |      |    |                               |      |      |                           |       |    |                                              |   |    |                         |      |    |                      |      |    |                                                    |      |    |                                            |      |    |                                                 |      |    |                                    |      |      |                                 |       |    |                                  |      |    |                              |       |    |  |  |

Certification Summary Information Report

| Test Group           |               | VKMXV02.5DR3              |               |                |     | Evaporative/Refueling Family |                          |        |         | VKMXR0131DRG        |          |           |
|----------------------|---------------|---------------------------|---------------|----------------|-----|------------------------------|--------------------------|--------|---------|---------------------|----------|-----------|
| 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                  | 50,000 miles  | Federal Tier 3 Bin 30     | CO            | 0.51           | --  | --                           | --                       | 0.05   | --      | 0.6                 | 10.0     | Pass      |
| Fed                  | 120,000 miles | Federal Tier 3 Bin 30     | HC-NM         | 0.04           | --  | --                           | --                       | 0.0030 | --      | 0.0                 | 0.3      | Pass      |
| CA                   | 50,000 miles  | California LEV-IV SULEV30 | CO            | 0.51           | --  | --                           | --                       | 0.05   | --      | 0.6                 | 10.0     | Pass      |

## Certification Summary Information Report

|                                                |                                           |                                       |                                                    |
|------------------------------------------------|-------------------------------------------|---------------------------------------|----------------------------------------------------|
| <b>Test Group</b>                              | VKMXV02.5DR3                              | <b>Evaporative/Refueling Family</b>   | VKMXR0131DRG                                       |
| <b>Test #</b>                                  | <b>VKMX10092926</b>                       | <b>Test Procedure</b>                 | <b>52 - Fed. fuel 50 F exh.</b>                    |
| <b>Exhaust Test # for this Evap Test</b>       | --                                        | <b>Test Fuel Type</b>                 | 48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.) |
| <b>Test Date</b>                               | 12/09/2025                                | <b>Fuel</b>                           | Gasoline                                           |
| <b>Fuel Batch ID</b>                           | 25T-03                                    | <b>Fuel Calibration Number</b>        | 1                                                  |
| <b>Vehicle Class</b>                           | LDV/Passenger Car                         | <b>DF Type</b>                        | Mfr. Determined                                    |
| <b>Verify Test Lab ID</b>                      | 772-1, Jangduck-Dong                      |                                       |                                                    |
| <b>E10 Evaporative Test Measurement Method</b> | --                                        |                                       |                                                    |
| <b>Test Start Odometer Reading</b>             | 4204                                      | <b>Odometer Units</b>                 | M                                                  |
| <b>4WD Test Dyno</b>                           | No                                        | <b>Diesel Adjustment Factor Usage</b> | --                                                 |
| <b>State of Charge Delta</b>                   | --                                        |                                       |                                                    |
| <b>Drive Cycle Speed Tolerance Criteria</b>    | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec) | <b>Road Speed Fan Usage</b>           | Yes                                                |

## Test Results

| Test Result Name                                   | Unrounded Test Result | Verify Calculated FE Equivalent Value |
|----------------------------------------------------|-----------------------|---------------------------------------|
| CO (Carbon Monoxide)                               | 0.22                  | --                                    |
| DT-ASCR (Drive Trace Absolute Speed Change Rating) | 0.91                  | --                                    |
| DT-EER (Drive Trace Energy Economy Rating)         | 0.94                  | --                                    |
| DT-IWRR (Drive Trace Inertia Work Ratio Rating)    | 1.55                  | --                                    |
| NOX (Nitrogen Oxide)                               | 0.0012                | --                                    |
| NMOG (Non-methane organic gases)                   | 0.01                  | --                                    |

## Manufacturer Test Comments

27MY DL3 2.5 8AT AWD 18inch GPF (EDV) E10 50F

| Certification Region | Useful Life | Standard Level            | Emission Name | Rounded Result | RAF | NMOG/NM HC Ratio | Diesel Adjustment Factor | Add DF | Mult DF | Certification Level | Standard | Pass/Fail |
|----------------------|-------------|---------------------------|---------------|----------------|-----|------------------|--------------------------|--------|---------|---------------------|----------|-----------|
| CA                   | 4,000 miles | California LEV-IV SULEV30 | CO            | 0.22           | --  | --               | --                       | 0      | --      | 0.2                 | 1.0      | Pass      |
| CA                   | 4,000 miles | California LEV-IV SULEV30 | NMOG          | 0.0100         | --  | 1.10             | --                       | 0      | --      | 0.010               | 99.999   | Pass      |
| CA                   | 4,000 miles | California LEV-IV SULEV30 | NMOG+NOX      | 0.0112         | --  | --               | --                       | --     | --      | 0.011               | 0.060    | Pass      |
| CA                   | 4,000 miles | California LEV-IV SULEV30 | NOX           | 0.0012         | --  | --               | --                       | 0      | --      | 0.001               | 99.999   | Pass      |

## Certification Summary Information Report

| Test Group                              | VKMXV02.5DR3                              | Evaporative/Refueling Family   | VKMXR0131DRG                         |
|-----------------------------------------|-------------------------------------------|--------------------------------|--------------------------------------|
| Test #                                  | VKMX91006720                              | Test Procedure                 | 2 - CVS 75 and later (w/o can. load) |
| Exhaust Test # for this Evap Test       | --                                        | Test Fuel Type                 | 61 - Tier 2 Cert Gasoline            |
| Test Date                               | 03/05/2026                                | Fuel                           | Gasoline                             |
| Fuel Batch ID                           | 29351                                     | Fuel Calibration Number        | 1                                    |
| Vehicle Class                           | LDV/Passenger Car                         | DF Type                        | Mfr. Determined                      |
| Verify Test Lab ID                      | --                                        |                                |                                      |
| E10 Evaporative Test Measurement Method | --                                        |                                |                                      |
| Test Start Odometer Reading             | 4669                                      | Odometer Units                 | M                                    |
| 4WD Test Dyno                           | No                                        | Diesel Adjustment Factor Usage | --                                   |
| State of Charge Delta                   | --                                        |                                |                                      |
| Drive Cycle Speed Tolerance Criteria    | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec) | Road Speed Fan Usage           | Yes                                  |
| Test Results                            |                                           |                                |                                      |

## Certification Summary Information Report

| Test Group                 | VKMXV02.5DR3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Evaporative/Refueling Family                                                                                                                                                                               | VKMXR0131DRG                                             |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|----------------------------------|----------------------------------|--------------|----------------------------------|-----------|----|-------------------------------|-----------|----|---------------------------|-----------|----|----------------------------------------------|-----------|----|----------------------------------|-------------|----|----------------------------------|---|----|-------------------------------|------------|----|---------------------------|-----------|----|----------------------------------------------|---|----|----------------------------------|-------------|----|----------------------------------|-----------|----|-------------------------------|------------|----|---------------------------|-----------|----|----------------------------------------------|---|----|-------------------------|-----------|----|----------------------|----------|----|----------------------------------------------------|-----------|----|--------------------------------------------|-----------|----|-------------------------------------------------|-----------|----|------------------------------------|------------|----|----------------------|-----------|----|---------------------|-----------|----|---------------------------------|----------|----|----------------------------------|-----------|----|------------------------------|-----------|----|--|
|                            | <table><tr><th>Test Result Name</th><th>Unrounded Test Result</th><th>Verify Calculated FE Equivalent Value (miles per gallon)</th></tr><tr><td>CO2 BAG 1 (Bag 1 Carbon Dioxide)</td><td>307.096344</td><td>--</td></tr><tr><td>CO BAG 1 (Bag 1 Carbon Monoxide)</td><td>0.7903282</td><td>--</td></tr><tr><td>FE BAG 1 (Bag 1 Fuel Economy)</td><td>28.894865</td><td>--</td></tr><tr><td>CH4 BAG 1 (Bag 1 Methane)</td><td>0.0073334</td><td>--</td></tr><tr><td>NMOG BAG 1 (Bag 1 Non-methane organic gases)</td><td>0.0278158</td><td>--</td></tr><tr><td>CO2 BAG 2 (Bag 2 Carbon Dioxide)</td><td>318.1760559</td><td>--</td></tr><tr><td>CO BAG 2 (Bag 2 Carbon Monoxide)</td><td>0</td><td>--</td></tr><tr><td>FE BAG 2 (Bag 2 Fuel Economy)</td><td>28.0111294</td><td>--</td></tr><tr><td>CH4 BAG 2 (Bag 2 Methane)</td><td>0.0014502</td><td>--</td></tr><tr><td>NMOG BAG 2 (Bag 2 Non-methane organic gases)</td><td>0</td><td>--</td></tr><tr><td>CO2 BAG 3 (Bag 3 Carbon Dioxide)</td><td>273.6326904</td><td>--</td></tr><tr><td>CO BAG 3 (Bag 3 Carbon Monoxide)</td><td>0.0013495</td><td>--</td></tr><tr><td>FE BAG 3 (Bag 3 Fuel Economy)</td><td>32.5701065</td><td>--</td></tr><tr><td>CH4 BAG 3 (Bag 3 Methane)</td><td>0.0023802</td><td>--</td></tr><tr><td>NMOG BAG 3 (Bag 3 Non-methane organic gases)</td><td>0</td><td>--</td></tr><tr><td>METHANE (CH4 - Methane)</td><td>0.0029227</td><td>--</td></tr><tr><td>CO (Carbon Monoxide)</td><td>0.163869</td><td>--</td></tr><tr><td>DT-ASCR (Drive Trace Absolute Speed Change Rating)</td><td>1.3329108</td><td>--</td></tr><tr><td>DT-EER (Drive Trace Energy Economy Rating)</td><td>1.1086432</td><td>--</td></tr><tr><td>DT-IWRR (Drive Trace Inertia Work Ratio Rating)</td><td>2.2046726</td><td>--</td></tr><tr><td>MFR FE (Manufacturer Fuel Economy)</td><td>29.3239803</td><td>--</td></tr><tr><td>NOX (Nitrogen Oxide)</td><td>0.0016148</td><td>--</td></tr><tr><td>N2O (Nitrous Oxide)</td><td>0.0004941</td><td>--</td></tr><tr><td>HC-NM (Non-methane Hydrocarbon)</td><td>0.005533</td><td>--</td></tr><tr><td>NMOG (Non-methane organic gases)</td><td>0.0057544</td><td>--</td></tr><tr><td>HC-TOTAL (Total Hydrocarbon)</td><td>0.0079105</td><td>--</td></tr></table> | Test Result Name                                                                                                                                                                                           | Unrounded Test Result                                    | Verify Calculated FE Equivalent Value (miles per gallon) | CO2 BAG 1 (Bag 1 Carbon Dioxide) | 307.096344                       | --           | CO BAG 1 (Bag 1 Carbon Monoxide) | 0.7903282 | -- | FE BAG 1 (Bag 1 Fuel Economy) | 28.894865 | -- | CH4 BAG 1 (Bag 1 Methane) | 0.0073334 | -- | NMOG BAG 1 (Bag 1 Non-methane organic gases) | 0.0278158 | -- | CO2 BAG 2 (Bag 2 Carbon Dioxide) | 318.1760559 | -- | CO BAG 2 (Bag 2 Carbon Monoxide) | 0 | -- | FE BAG 2 (Bag 2 Fuel Economy) | 28.0111294 | -- | CH4 BAG 2 (Bag 2 Methane) | 0.0014502 | -- | NMOG BAG 2 (Bag 2 Non-methane organic gases) | 0 | -- | CO2 BAG 3 (Bag 3 Carbon Dioxide) | 273.6326904 | -- | CO BAG 3 (Bag 3 Carbon Monoxide) | 0.0013495 | -- | FE BAG 3 (Bag 3 Fuel Economy) | 32.5701065 | -- | CH4 BAG 3 (Bag 3 Methane) | 0.0023802 | -- | NMOG BAG 3 (Bag 3 Non-methane organic gases) | 0 | -- | METHANE (CH4 - Methane) | 0.0029227 | -- | CO (Carbon Monoxide) | 0.163869 | -- | DT-ASCR (Drive Trace Absolute Speed Change Rating) | 1.3329108 | -- | DT-EER (Drive Trace Energy Economy Rating) | 1.1086432 | -- | DT-IWRR (Drive Trace Inertia Work Ratio Rating) | 2.2046726 | -- | MFR FE (Manufacturer Fuel Economy) | 29.3239803 | -- | NOX (Nitrogen Oxide) | 0.0016148 | -- | N2O (Nitrous Oxide) | 0.0004941 | -- | HC-NM (Non-methane Hydrocarbon) | 0.005533 | -- | NMOG (Non-methane organic gases) | 0.0057544 | -- | HC-TOTAL (Total Hydrocarbon) | 0.0079105 | -- |  |
|                            | Test Result Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Unrounded Test Result                                                                                                                                                                                      | Verify Calculated FE Equivalent Value (miles per gallon) |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | CO2 BAG 1 (Bag 1 Carbon Dioxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 307.096344                                                                                                                                                                                                 | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | CO BAG 1 (Bag 1 Carbon Monoxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.7903282                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | FE BAG 1 (Bag 1 Fuel Economy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 28.894865                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | CH4 BAG 1 (Bag 1 Methane)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0.0073334                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | NMOG BAG 1 (Bag 1 Non-methane organic gases)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.0278158                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | CO2 BAG 2 (Bag 2 Carbon Dioxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 318.1760559                                                                                                                                                                                                | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | CO BAG 2 (Bag 2 Carbon Monoxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0                                                                                                                                                                                                          | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | FE BAG 2 (Bag 2 Fuel Economy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 28.0111294                                                                                                                                                                                                 | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | CH4 BAG 2 (Bag 2 Methane)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0.0014502                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | NMOG BAG 2 (Bag 2 Non-methane organic gases)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0                                                                                                                                                                                                          | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | CO2 BAG 3 (Bag 3 Carbon Dioxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 273.6326904                                                                                                                                                                                                | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | CO BAG 3 (Bag 3 Carbon Monoxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.0013495                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | FE BAG 3 (Bag 3 Fuel Economy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 32.5701065                                                                                                                                                                                                 | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | CH4 BAG 3 (Bag 3 Methane)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0.0023802                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | NMOG BAG 3 (Bag 3 Non-methane organic gases)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0                                                                                                                                                                                                          | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | METHANE (CH4 - Methane)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.0029227                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | CO (Carbon Monoxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.163869                                                                                                                                                                                                   | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | DT-ASCR (Drive Trace Absolute Speed Change Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1.3329108                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | DT-EER (Drive Trace Energy Economy Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1.1086432                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | DT-IWRR (Drive Trace Inertia Work Ratio Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 2.2046726                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | MFR FE (Manufacturer Fuel Economy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 29.3239803                                                                                                                                                                                                 | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | NOX (Nitrogen Oxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.0016148                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | N2O (Nitrous Oxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0.0004941                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | HC-NM (Non-methane Hydrocarbon)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.005533                                                                                                                                                                                                   | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | NMOG (Non-methane organic gases)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.0057544                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | HC-TOTAL (Total Hydrocarbon)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.0079105                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <table><tr><th>Test Result Name</th><th>Unrounded Test Result</th><th>Verify Calculated CREE/OPT-CREE</th></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>9999.9999999</td><td>304</td></tr></table> | Test Result Name                                         | Unrounded Test Result                                    | Verify Calculated CREE/OPT-CREE  | Carbon-Related Exhaust Emissions | 9999.9999999 | 304                              |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | Test Result Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Unrounded Test Result                                                                                                                                                                                      | Verify Calculated CREE/OPT-CREE                          |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            | Carbon-Related Exhaust Emissions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 9999.9999999                                                                                                                                                                                               | 304                                                      |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <table><tr><th>Test Result Name</th><th>Unrounded Test Result</th><th>Verify Calculated CO2</th></tr><tr><td>Carbon dioxide</td><td>303.6502991</td><td>--</td></tr></table>                               | Test Result Name                                         | Unrounded Test Result                                    | Verify Calculated CO2            | Carbon dioxide                   | 303.6502991  | --                               |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
| Test Result Name           | Unrounded Test Result                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Verify Calculated CO2                                                                                                                                                                                      |                                                          |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
| Carbon dioxide             | 303.6502991                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | --                                                                                                                                                                                                         |                                                          |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |
| Manufacturer Test Comments | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                            |                                                          |                                                          |                                  |                                  |              |                                  |           |    |                               |           |    |                           |           |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |            |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |           |    |                               |            |    |                           |           |    |                                              |   |    |                         |           |    |                      |          |    |                                                    |           |    |                                            |           |    |                                                 |           |    |                                    |            |    |                      |           |    |                     |           |    |                                 |          |    |                                  |           |    |                              |           |    |  |

## Certification Summary Information Report

| Test Group           |               | VKMXV02.5DR3              |               |                |     | Evaporative/Refueling Family |                          |        |         | VKMXR0131DRG        |          |           |
|----------------------|---------------|---------------------------|---------------|----------------|-----|------------------------------|--------------------------|--------|---------|---------------------|----------|-----------|
| 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                  | 120,000 miles | Federal Tier 3 Bin 30     | CREE          | 304            | --  | --                           | --                       | 0      | --      | 304                 | --       | --        |
| Fed                  | 120,000 miles | Federal Tier 3 Bin 30     | METHANE       | 0.0029         | --  | --                           | --                       | 0.0019 | --      | 0.005               | 0.030    | Pass      |
| Fed                  | 120,000 miles | Federal Tier 3 Bin 30     | N2O           | 0.0005         | --  | --                           | --                       | 0.0011 | --      | 0.002               | 0.010    | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | CO            | 0.16           | --  | --                           | --                       | 0.16   | --      | 0.3                 | 1.0      | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | NMOG          | 0.0058         | --  | 1.10                         | --                       | 0.0042 | --      | 0.010               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | NMOG+NOX      | 0.0074         | --  | 1.10                         | --                       | --     | --      | 0.015               | 0.030    | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | NOX           | 0.0016         | --  | --                           | --                       | 0.0033 | --      | 0.005               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | CO            | 0.16           | --  | --                           | --                       | 0.16   | --      | 0.3                 | 1.0      | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | NMOG          | 0.0058         | --  | 1.10                         | --                       | 0.0042 | --      | 0.010               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | NMOG+NOX      | 0.0074         | --  | 1.10                         | --                       | --     | --      | 0.015               | 0.030    | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | NOX           | 0.0016         | --  | --                           | --                       | 0.0033 | --      | 0.005               | 99.999   | Pass      |

**NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.**

## Certification Summary Information Report

| Test Group                                     | VKMXV02.5DR3                              | Evaporative/Refueling Family          | VKMXR0131DRG                                        |
|------------------------------------------------|-------------------------------------------|---------------------------------------|-----------------------------------------------------|
| <b>Test #</b>                                  | <b>VKMX91006733</b>                       | <b>Test Procedure</b>                 | <b>21 - Federal fuel 2-day exhaust (w/can load)</b> |
| <b>Exhaust Test # for this Evap Test</b>       | --                                        | <b>Test Fuel Type</b>                 | 48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.)  |
| <b>Test Date</b>                               | 03/19/2026                                | <b>Fuel</b>                           | Gasoline                                            |
| <b>Fuel Batch ID</b>                           | 43732                                     | <b>Fuel Calibration Number</b>        | 2                                                   |
| <b>Vehicle Class</b>                           | LDV/Passenger Car                         | <b>DF Type</b>                        | Mfr. Determined                                     |
| <b>Verify Test Lab ID</b>                      | --                                        |                                       |                                                     |
| <b>E10 Evaporative Test Measurement Method</b> | --                                        |                                       |                                                     |
| <b>Test Start Odometer Reading</b>             | 4779                                      | <b>Odometer Units</b>                 | M                                                   |
| <b>4WD Test Dyno</b>                           | No                                        | <b>Diesel Adjustment Factor Usage</b> | --                                                  |
| <b>State of Charge Delta</b>                   | --                                        |                                       |                                                     |
| <b>Drive Cycle Speed Tolerance Criteria</b>    | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec) | <b>Road Speed Fan Usage</b>           | Yes                                                 |
| <b>Test Results</b>                            |                                           |                                       |                                                     |

## Certification Summary Information Report

| Test Group                                                                                                                                                              | VKMXV02.5DR3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Evaporative/Refueling Family                                                                                                                                                                               | VKMXR0131DRG                                             |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
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|                                                                                                                                                                         | <table><tr><th>Test Result Name</th><th>Unrounded Test Result</th><th>Verify Calculated FE Equivalent Value (miles per gallon)</th></tr><tr><td>CO2 BAG 1 (Bag 1 Carbon Dioxide)</td><td>307.7420349</td><td>--</td></tr><tr><td>CO BAG 1 (Bag 1 Carbon Monoxide)</td><td>0.6981723</td><td>--</td></tr><tr><td>FE BAG 1 (Bag 1 Fuel Economy)</td><td>999</td><td>--</td></tr><tr><td>CH4 BAG 1 (Bag 1 Methane)</td><td>0.007139</td><td>--</td></tr><tr><td>NMOG BAG 1 (Bag 1 Non-methane organic gases)</td><td>0.0232139</td><td>--</td></tr><tr><td>CO2 BAG 2 (Bag 2 Carbon Dioxide)</td><td>311.5274963</td><td>--</td></tr><tr><td>CO BAG 2 (Bag 2 Carbon Monoxide)</td><td>0</td><td>--</td></tr><tr><td>FE BAG 2 (Bag 2 Fuel Economy)</td><td>999</td><td>--</td></tr><tr><td>CH4 BAG 2 (Bag 2 Methane)</td><td>0.0011161</td><td>--</td></tr><tr><td>NMOG BAG 2 (Bag 2 Non-methane organic gases)</td><td>0</td><td>--</td></tr><tr><td>CO2 BAG 3 (Bag 3 Carbon Dioxide)</td><td>274.5946045</td><td>--</td></tr><tr><td>CO BAG 3 (Bag 3 Carbon Monoxide)</td><td>0</td><td>--</td></tr><tr><td>FE BAG 3 (Bag 3 Fuel Economy)</td><td>999</td><td>--</td></tr><tr><td>CH4 BAG 3 (Bag 3 Methane)</td><td>0.0018522</td><td>--</td></tr><tr><td>NMOG BAG 3 (Bag 3 Non-methane organic gases)</td><td>0</td><td>--</td></tr><tr><td>METHANE (CH4 - Methane)</td><td>0.0025639</td><td>--</td></tr><tr><td>CO (Carbon Monoxide)</td><td>0.1444254</td><td>--</td></tr><tr><td>DT-ASCR (Drive Trace Absolute Speed Change Rating)</td><td>0.7796832</td><td>--</td></tr><tr><td>DT-EER (Drive Trace Energy Economy Rating)</td><td>0.220013</td><td>--</td></tr><tr><td>DT-IWRR (Drive Trace Inertia Work Ratio Rating)</td><td>1.2169528</td><td>--</td></tr><tr><td>MFR FE (Manufacturer Fuel Economy)</td><td>999</td><td>--</td></tr><tr><td>NOX (Nitrogen Oxide)</td><td>0.0021523</td><td>--</td></tr><tr><td>N2O (Nitrous Oxide)</td><td>0.0004009</td><td>--</td></tr><tr><td>HC-NM (Non-methane Hydrocarbon)</td><td>0.0043647</td><td>--</td></tr><tr><td>NMOG (Non-methane organic gases)</td><td>0.0047931</td><td>--</td></tr><tr><td>PM (Particulate Matter)</td><td>0.0000059</td><td>--</td></tr><tr><td>HC-TOTAL (Total Hydrocarbon)</td><td>0.0063567</td><td>--</td></tr></table> | Test Result Name                                                                                                                                                                                           | Unrounded Test Result                                    | Verify Calculated FE Equivalent Value (miles per gallon) | CO2 BAG 1 (Bag 1 Carbon Dioxide) | 307.7420349                      | --           | CO BAG 1 (Bag 1 Carbon Monoxide) | 0.6981723 | -- | FE BAG 1 (Bag 1 Fuel Economy) | 999 | -- | CH4 BAG 1 (Bag 1 Methane) | 0.007139 | -- | NMOG BAG 1 (Bag 1 Non-methane organic gases) | 0.0232139 | -- | CO2 BAG 2 (Bag 2 Carbon Dioxide) | 311.5274963 | -- | CO BAG 2 (Bag 2 Carbon Monoxide) | 0 | -- | FE BAG 2 (Bag 2 Fuel Economy) | 999 | -- | CH4 BAG 2 (Bag 2 Methane) | 0.0011161 | -- | NMOG BAG 2 (Bag 2 Non-methane organic gases) | 0 | -- | CO2 BAG 3 (Bag 3 Carbon Dioxide) | 274.5946045 | -- | CO BAG 3 (Bag 3 Carbon Monoxide) | 0 | -- | FE BAG 3 (Bag 3 Fuel Economy) | 999 | -- | CH4 BAG 3 (Bag 3 Methane) | 0.0018522 | -- | NMOG BAG 3 (Bag 3 Non-methane organic gases) | 0 | -- | METHANE (CH4 - Methane) | 0.0025639 | -- | CO (Carbon Monoxide) | 0.1444254 | -- | DT-ASCR (Drive Trace Absolute Speed Change Rating) | 0.7796832 | -- | DT-EER (Drive Trace Energy Economy Rating) | 0.220013 | -- | DT-IWRR (Drive Trace Inertia Work Ratio Rating) | 1.2169528 | -- | MFR FE (Manufacturer Fuel Economy) | 999 | -- | NOX (Nitrogen Oxide) | 0.0021523 | -- | N2O (Nitrous Oxide) | 0.0004009 | -- | HC-NM (Non-methane Hydrocarbon) | 0.0043647 | -- | NMOG (Non-methane organic gases) | 0.0047931 | -- | PM (Particulate Matter) | 0.0000059 | -- | HC-TOTAL (Total Hydrocarbon) | 0.0063567 | -- |  |
|                                                                                                                                                                         | Test Result Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Unrounded Test Result                                                                                                                                                                                      | Verify Calculated FE Equivalent Value (miles per gallon) |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | CO2 BAG 1 (Bag 1 Carbon Dioxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 307.7420349                                                                                                                                                                                                | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | CO BAG 1 (Bag 1 Carbon Monoxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.6981723                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | FE BAG 1 (Bag 1 Fuel Economy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 999                                                                                                                                                                                                        | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | CH4 BAG 1 (Bag 1 Methane)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.007139                                                                                                                                                                                                   | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | NMOG BAG 1 (Bag 1 Non-methane organic gases)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.0232139                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | CO2 BAG 2 (Bag 2 Carbon Dioxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 311.5274963                                                                                                                                                                                                | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | CO BAG 2 (Bag 2 Carbon Monoxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0                                                                                                                                                                                                          | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | FE BAG 2 (Bag 2 Fuel Economy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 999                                                                                                                                                                                                        | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | CH4 BAG 2 (Bag 2 Methane)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.0011161                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | NMOG BAG 2 (Bag 2 Non-methane organic gases)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0                                                                                                                                                                                                          | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | CO2 BAG 3 (Bag 3 Carbon Dioxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 274.5946045                                                                                                                                                                                                | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | CO BAG 3 (Bag 3 Carbon Monoxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0                                                                                                                                                                                                          | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | FE BAG 3 (Bag 3 Fuel Economy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 999                                                                                                                                                                                                        | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | CH4 BAG 3 (Bag 3 Methane)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.0018522                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | NMOG BAG 3 (Bag 3 Non-methane organic gases)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0                                                                                                                                                                                                          | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | METHANE (CH4 - Methane)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0.0025639                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | CO (Carbon Monoxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.1444254                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | DT-ASCR (Drive Trace Absolute Speed Change Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0.7796832                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | DT-EER (Drive Trace Energy Economy Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.220013                                                                                                                                                                                                   | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | DT-IWRR (Drive Trace Inertia Work Ratio Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1.2169528                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | MFR FE (Manufacturer Fuel Economy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 999                                                                                                                                                                                                        | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | NOX (Nitrogen Oxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.0021523                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | N2O (Nitrous Oxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.0004009                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | HC-NM (Non-methane Hydrocarbon)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0.0043647                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | NMOG (Non-methane organic gases)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.0047931                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | PM (Particulate Matter)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0.0000059                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | HC-TOTAL (Total Hydrocarbon)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.0063567                                                                                                                                                                                                  | --                                                       |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <table><tr><th>Test Result Name</th><th>Unrounded Test Result</th><th>Verify Calculated CREE/OPT-CREE</th></tr><tr><td>Carbon-Related Exhaust Emissions</td><td>9999.9999999</td><td>301</td></tr></table> | Test Result Name                                         | Unrounded Test Result                                    | Verify Calculated CREE/OPT-CREE  | Carbon-Related Exhaust Emissions | 9999.9999999 | 301                              |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | Test Result Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Unrounded Test Result                                                                                                                                                                                      | Verify Calculated CREE/OPT-CREE                          |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         | Carbon-Related Exhaust Emissions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 9999.9999999                                                                                                                                                                                               | 301                                                      |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
|                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <table><tr><th>Test Result Name</th><th>Unrounded Test Result</th><th>Verify Calculated CO2</th></tr><tr><td>Carbon dioxide</td><td>300.6124268</td><td>--</td></tr></table>                               | Test Result Name                                         | Unrounded Test Result                                    | Verify Calculated CO2            | Carbon dioxide                   | 300.6124268  | --                               |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
| Test Result Name                                                                                                                                                        | Unrounded Test Result                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Verify Calculated CO2                                                                                                                                                                                      |                                                          |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
| Carbon dioxide                                                                                                                                                          | 300.6124268                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | --                                                                                                                                                                                                         |                                                          |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |
| Manufacturer Test Comments                      None      Unrounded Result for the following test results were modified by Verify: FE BAG 2, MFR FE, FE BAG 3, FE BAG 1 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                            |                                                          |                                                          |                                  |                                  |              |                                  |           |    |                               |     |    |                           |          |    |                                              |           |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                                  |             |    |                                  |   |    |                               |     |    |                           |           |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |          |    |                                                 |           |    |                                    |     |    |                      |           |    |                     |           |    |                                 |           |    |                                  |           |    |                         |           |    |                              |           |    |  |

## Manufacturer Test Comments

None Unrounded Result for the following test results were modified by Verify: FE BAG 2, MFR FE, FE BAG 3, FE BAG 1

## Certification Summary Information Report

| Test Group           |               | VKMXV02.5DR3              |               |                | Evaporative/Refueling Family |                  |                          |          |         | VKMXR0131DRG        |          |           |
|----------------------|---------------|---------------------------|---------------|----------------|------------------------------|------------------|--------------------------|----------|---------|---------------------|----------|-----------|
| 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                  | 120,000 miles | Federal Tier 3 Bin 30     | CREE          | 301            | --                           | --               | --                       | 0.204399 | --      | 301                 | --       | --        |
| Fed                  | 120,000 miles | Federal Tier 3 Bin 30     | METHANE       | 0.0026         | --                           | --               | --                       | 0.0019   | --      | 0.004               | 0.030    | Pass      |
| Fed                  | 120,000 miles | Federal Tier 3 Bin 30     | N2O           | 0.0004         | --                           | --               | --                       | 0.0011   | --      | 0.002               | 0.010    | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | CO            | 0.14           | --                           | --               | --                       | 0.16     | --      | 0.3                 | 1.0      | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | CO-COMP       | 0.38           | --                           | --               | --                       | 0        | --      | 0.4                 | 4.2      | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | NMOG          | 0.0048         | --                           | 1.10             | --                       | 0.0042   | --      | 0.009               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | NMOG+NOX      | 0.0070         | --                           | --               | --                       | --       | --      | 0.014               | 0.030    | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | NMOG+NOX-COMP | 0.0118         | --                           | --               | --                       | 0        | --      | 0.012               | 0.030    | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | NOX           | 0.0022         | --                           | --               | --                       | 0.0033   | --      | 0.006               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | PM            | 0.0000         | --                           | --               | --                       | 0.0000   | --      | 0.000               | 0.003    | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | CO            | 0.14           | --                           | --               | --                       | 0.16     | --      | 0.3                 | 1.0      | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | NMOG          | 0.0048         | --                           | 1.10             | --                       | 0.0042   | --      | 0.009               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | NMOG+NOX      | 0.0070         | --                           | --               | --                       | --       | --      | 0.014               | 0.030    | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | NOX           | 0.0022         | --                           | --               | --                       | 0.0033   | --      | 0.006               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | PM            | 0.0000         | --                           | --               | --                       | 0.0000   | --      | 0.000               | 0.001    | Pass      |

**NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.**

## Certification Summary Information Report

|                                                           |                                           |                                                                 |                           |
|-----------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------|---------------------------|
| <b>Test Group</b>                                         | VKMXV02.5DR3                              | <b>Evaporative/Refueling Family</b>                             | VKMXR0131DRG              |
| <b>Test #</b>                                             | <b>VKMX91006719</b>                       | <b>Test Procedure</b>                                           | <b>3 - HWFE</b>           |
| <b>Exhaust Test # for this Evap Test</b>                  | --                                        | <b>Test Fuel Type</b>                                           | 61 - Tier 2 Cert Gasoline |
| <b>Test Date</b>                                          | 03/05/2026                                | <b>Fuel</b>                                                     | Gasoline                  |
| <b>Fuel Batch ID</b>                                      | 29351                                     | <b>Fuel Calibration Number</b>                                  | 1                         |
| <b>Vehicle Class</b>                                      | LDV/Passenger Car                         | <b>DF Type</b>                                                  | Mfr. Determined           |
| <b>Verify Test Lab ID</b>                                 | --                                        |                                                                 |                           |
| <b>E10 Evaporative Test Measurement Method</b>            | --                                        |                                                                 |                           |
| <b>Test Start Odometer Reading</b>                        | 4680                                      | <b>Odometer Units</b>                                           | M                         |
| <b>4WD Test Dyno</b>                                      | No                                        | <b>Diesel Adjustment Factor Usage</b>                           | --                        |
| <b>State of Charge Delta</b>                              | --                                        |                                                                 |                           |
| <b>Drive Cycle Speed Tolerance Criteria</b>               | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec) | <b>Road Speed Fan Usage</b>                                     | Yes                       |
| <b>Test Results</b>                                       |                                           |                                                                 |                           |
| <b>Test Result Name</b>                                   | <b>Unrounded Test Result</b>              | <b>Verify Calculated FE Equivalent Value (miles per gallon)</b> |                           |
| <b>METHANE (CH4 - Methane)</b>                            | 0.0006659                                 | --                                                              |                           |
| <b>CO (Carbon Monoxide)</b>                               | 0                                         | --                                                              |                           |
| <b>DT-ASCR (Drive Trace Absolute Speed Change Rating)</b> | 1.6881144                                 | --                                                              |                           |
| <b>DT-EER (Drive Trace Energy Economy Rating)</b>         | 0.1079406                                 | --                                                              |                           |
| <b>DT-IWRR (Drive Trace Inertia Work Ratio Rating)</b>    | 2.0040715                                 | --                                                              |                           |
| <b>MFR FE (Manufacturer Fuel Economy)</b>                 | 46.2759247                                | --                                                              |                           |
| <b>NOX (Nitrogen Oxide)</b>                               | 0.0007275                                 | --                                                              |                           |
| <b>N2O (Nitrous Oxide)</b>                                | 0                                         | --                                                              |                           |
| <b>HC-NM (Non-methane Hydrocarbon)</b>                    | 0                                         | --                                                              |                           |
| <b>NMOG (Non-methane organic gases)</b>                   | 0                                         | --                                                              |                           |
| <b>HC-TOTAL (Total Hydrocarbon)</b>                       | 0.0003993                                 | --                                                              |                           |
| <b>Test Result Name</b>                                   | <b>Unrounded Test Result</b>              | <b>Verify Calculated CREE/OPT-CREE</b>                          |                           |
| <b>Carbon-Related Exhaust Emissions</b>                   | 9999.9999999                              | 193                                                             |                           |
| <b>Test Result Name</b>                                   | <b>Unrounded Test Result</b>              | <b>Verify Calculated CO2</b>                                    |                           |
| <b>Carbon dioxide</b>                                     | 192.5939789                               | --                                                              |                           |
| <b>Manufacturer Test Comments</b>                         | None                                      |                                                                 |                           |

## Certification Summary Information Report

| Test Group           |               | VKMXV02.5DR3              |               |                | Evaporative/Refueling Family |                  |                          |          |         | VKMXR0131DRG        |          |           |
|----------------------|---------------|---------------------------|---------------|----------------|------------------------------|------------------|--------------------------|----------|---------|---------------------|----------|-----------|
| 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                  | 120,000 miles | Federal Tier 3 Bin 30     | CREE          | 193            | --                           | --               | --                       | 0.204399 | --      | 193                 | --       | --        |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | NMOG          | 0.0000         | --                           | 1.03             | --                       | 0.0042   | --      | 0.004               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | NMOG+NOX      | 0.0007         | --                           | --               | --                       | --       | --      | 0.008               | 0.030    | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | NOX           | 0.0007         | --                           | --               | --                       | 0.0033   | --      | 0.004               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | NMOG          | 0.0000         | --                           | 1.03             | --                       | 0.0042   | --      | 0.004               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | NMOG+NOX      | 0.0007         | --                           | --               | --                       | --       | --      | 0.008               | 0.030    | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | NOX           | 0.0007         | --                           | --               | --                       | 0.0033   | --      | 0.004               | 99.999   | Pass      |

**NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.**

## Certification Summary Information Report

|                                                |                                           |                                       |                                                    |
|------------------------------------------------|-------------------------------------------|---------------------------------------|----------------------------------------------------|
| <b>Test Group</b>                              | VKMXV02.5DR3                              | <b>Evaporative/Refueling Family</b>   | VKMXR0131DRG                                       |
| <b>Test #</b>                                  | <b>VKMX91006734</b>                       | <b>Test Procedure</b>                 | <b>3 - HWFE</b>                                    |
| <b>Exhaust Test # for this Evap Test</b>       | --                                        | <b>Test Fuel Type</b>                 | 48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.) |
| <b>Test Date</b>                               | 03/18/2026                                | <b>Fuel</b>                           | Gasoline                                           |
| <b>Fuel Batch ID</b>                           | 43732                                     | <b>Fuel Calibration Number</b>        | 2                                                  |
| <b>Vehicle Class</b>                           | LDV/Passenger Car                         | <b>DF Type</b>                        | Mfr. Determined                                    |
| <b>Verify Test Lab ID</b>                      | --                                        |                                       |                                                    |
| <b>E10 Evaporative Test Measurement Method</b> | --                                        |                                       |                                                    |
| <b>Test Start Odometer Reading</b>             | 4735                                      | <b>Odometer Units</b>                 | M                                                  |
| <b>4WD Test Dyno</b>                           | No                                        | <b>Diesel Adjustment Factor Usage</b> | --                                                 |
| <b>State of Charge Delta</b>                   | --                                        |                                       |                                                    |
| <b>Drive Cycle Speed Tolerance Criteria</b>    | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec) | <b>Road Speed Fan Usage</b>           | Yes                                                |

## Test Results

| Test Result Name                                   | Unrounded Test Result | Verify Calculated FE Equivalent Value (miles per gallon) |
|----------------------------------------------------|-----------------------|----------------------------------------------------------|
| METHANE (CH4 - Methane)                            | 0.0003856             | --                                                       |
| CO (Carbon Monoxide)                               | 0.0035368             | --                                                       |
| DT-ASCR (Drive Trace Absolute Speed Change Rating) | 0.7255374             | --                                                       |
| DT-EER (Drive Trace Energy Economy Rating)         | 0.1312458             | --                                                       |
| DT-IWRR (Drive Trace Inertia Work Ratio Rating)    | 0.986905              | --                                                       |
| MFR FE (Manufacturer Fuel Economy)                 | 45.965416             | --                                                       |
| NOX (Nitrogen Oxide)                               | 0.0008368             | --                                                       |
| N2O (Nitrous Oxide)                                | 0                     | --                                                       |
| HC-NM (Non-methane Hydrocarbon)                    | 0                     | --                                                       |
| NMOG (Non-methane organic gases)                   | 0                     | --                                                       |
| HC-TOTAL (Total Hydrocarbon)                       | 0                     | --                                                       |

| Test Result Name                 | Unrounded Test Result | Verify Calculated CREE/OPT-CREE |
|----------------------------------|-----------------------|---------------------------------|
| Carbon-Related Exhaust Emissions | 9999.9999999          | 189                             |

| Test Result Name | Unrounded Test Result | Verify Calculated CO2 |
|------------------|-----------------------|-----------------------|
| Carbon dioxide   | 189.2891083           | --                    |

Manufacturer Test Comments      None

## Certification Summary Information Report

| Test Group           |               | VKMXV02.5DR3              |               |                | Evaporative/Refueling Family |                  |                          |          |         | VKMXR0131DRG        |          |           |
|----------------------|---------------|---------------------------|---------------|----------------|------------------------------|------------------|--------------------------|----------|---------|---------------------|----------|-----------|
| 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                  | 120,000 miles | Federal Tier 3 Bin 30     | CREE          | 189            | --                           | --               | --                       | 0.204399 | --      | 189                 | --       | --        |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | NMOG          | 0.0000         | --                           | 1.03             | --                       | 0.0042   | --      | 0.004               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | NMOG+NOX      | 0.0008         | --                           | --               | --                       | --       | --      | 0.008               | 0.030    | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | NOX           | 0.0008         | --                           | --               | --                       | 0.0033   | --      | 0.004               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | NMOG          | 0.0000         | --                           | 1.03             | --                       | 0.0042   | --      | 0.004               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | NMOG+NOX      | 0.0008         | --                           | --               | --                       | --       | --      | 0.008               | 0.030    | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | NOX           | 0.0008         | --                           | --               | --                       | 0.0033   | --      | 0.004               | 99.999   | Pass      |

**NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.**

## Certification Summary Information Report

| Test Group                              | VKMXV02.5DR3                              | Evaporative/Refueling Family   | VKMXR0131DRG                                       |
|-----------------------------------------|-------------------------------------------|--------------------------------|----------------------------------------------------|
| Test #                                  | VKMX91006730                              | Test Procedure                 | 90 - US06                                          |
| Exhaust Test # for this Evap Test       | --                                        | Test Fuel Type                 | 48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.) |
| Test Date                               | 03/18/2026                                | Fuel                           | Gasoline                                           |
| Fuel Batch ID                           | 43732                                     | Fuel Calibration Number        | 2                                                  |
| Vehicle Class                           | LDV/Passenger Car                         | DF Type                        | Mfr. Determined                                    |
| Verify Test Lab ID                      | --                                        |                                |                                                    |
| E10 Evaporative Test Measurement Method | --                                        |                                |                                                    |
| Test Start Odometer Reading             | 4755                                      | Odometer Units                 | M                                                  |
| 4WD Test Dyno                           | No                                        | Diesel Adjustment Factor Usage | --                                                 |
| State of Charge Delta                   | --                                        |                                |                                                    |
| Drive Cycle Speed Tolerance Criteria    | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec) | Road Speed Fan Usage           | Yes                                                |
| Test Results                            |                                           |                                |                                                    |

## Certification Summary Information Report

| Test Group | VKMXV02.5DR3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Evaporative/Refueling Family                                                                                                                                                 | VKMXR0131DRG                                             |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|----------------------------------|----------------|-------------|----------------------------------|-----------|----|-------------------------------|-----|----|---------------------------|-----------|----|----------------------------------------------|---|----|----------------------------------|------------|----|----------------------------------|-----------|----|-------------------------------|-----|----|---------------------------|---------|----|----------------------------------------------|---|----|-------------------------|-----------|----|----------------------|-----------|----|----------------------------------------------------|-----------|----|--------------------------------------------|------------|----|-------------------------------------------------|-----------|----|------------------------------------|-----|----|----------------------|----------|----|---------------------|---|----|---------------------------------|---|----|----------------------------------|---|----|-------------------------|-----------|----|------------------------------|-----------|----|--|
|            | <table><tr><th>Test Result Name</th><th>Unrounded Test Result</th><th>Verify Calculated FE Equivalent Value (miles per gallon)</th></tr><tr><td>CO2 BAG 1 (Bag 1 Carbon Dioxide)</td><td>490.2381592</td><td>--</td></tr><tr><td>CO BAG 1 (Bag 1 Carbon Monoxide)</td><td>0.0572021</td><td>--</td></tr><tr><td>FE BAG 1 (Bag 1 Fuel Economy)</td><td>999</td><td>--</td></tr><tr><td>CH4 BAG 1 (Bag 1 Methane)</td><td>0.0028442</td><td>--</td></tr><tr><td>NMOG BAG 1 (Bag 1 Non-methane organic gases)</td><td>0</td><td>--</td></tr><tr><td>CO2 BAG 2 (Bag 2 Carbon Dioxide)</td><td>265.040863</td><td>--</td></tr><tr><td>CO BAG 2 (Bag 2 Carbon Monoxide)</td><td>0.2329911</td><td>--</td></tr><tr><td>FE BAG 2 (Bag 2 Fuel Economy)</td><td>999</td><td>--</td></tr><tr><td>CH4 BAG 2 (Bag 2 Methane)</td><td>0.00084</td><td>--</td></tr><tr><td>NMOG BAG 2 (Bag 2 Non-methane organic gases)</td><td>0</td><td>--</td></tr><tr><td>METHANE (CH4 - Methane)</td><td>0.0012868</td><td>--</td></tr><tr><td>CO (Carbon Monoxide)</td><td>0.1938015</td><td>--</td></tr><tr><td>DT-ASCR (Drive Trace Absolute Speed Change Rating)</td><td>1.0171726</td><td>--</td></tr><tr><td>DT-EER (Drive Trace Energy Economy Rating)</td><td>-1.5198854</td><td>--</td></tr><tr><td>DT-IWRR (Drive Trace Inertia Work Ratio Rating)</td><td>3.3923833</td><td>--</td></tr><tr><td>MFR FE (Manufacturer Fuel Economy)</td><td>999</td><td>--</td></tr><tr><td>NOX (Nitrogen Oxide)</td><td>0.003422</td><td>--</td></tr><tr><td>N2O (Nitrous Oxide)</td><td>0</td><td>--</td></tr><tr><td>HC-NM (Non-methane Hydrocarbon)</td><td>0</td><td>--</td></tr><tr><td>NMOG (Non-methane organic gases)</td><td>0</td><td>--</td></tr><tr><td>PM (Particulate Matter)</td><td>0.0000113</td><td>--</td></tr><tr><td>HC-TOTAL (Total Hydrocarbon)</td><td>0.0003295</td><td>--</td></tr></table> | Test Result Name                                                                                                                                                             | Unrounded Test Result                                    | Verify Calculated FE Equivalent Value (miles per gallon) | CO2 BAG 1 (Bag 1 Carbon Dioxide) | 490.2381592    | --          | CO BAG 1 (Bag 1 Carbon Monoxide) | 0.0572021 | -- | FE BAG 1 (Bag 1 Fuel Economy) | 999 | -- | CH4 BAG 1 (Bag 1 Methane) | 0.0028442 | -- | NMOG BAG 1 (Bag 1 Non-methane organic gases) | 0 | -- | CO2 BAG 2 (Bag 2 Carbon Dioxide) | 265.040863 | -- | CO BAG 2 (Bag 2 Carbon Monoxide) | 0.2329911 | -- | FE BAG 2 (Bag 2 Fuel Economy) | 999 | -- | CH4 BAG 2 (Bag 2 Methane) | 0.00084 | -- | NMOG BAG 2 (Bag 2 Non-methane organic gases) | 0 | -- | METHANE (CH4 - Methane) | 0.0012868 | -- | CO (Carbon Monoxide) | 0.1938015 | -- | DT-ASCR (Drive Trace Absolute Speed Change Rating) | 1.0171726 | -- | DT-EER (Drive Trace Energy Economy Rating) | -1.5198854 | -- | DT-IWRR (Drive Trace Inertia Work Ratio Rating) | 3.3923833 | -- | MFR FE (Manufacturer Fuel Economy) | 999 | -- | NOX (Nitrogen Oxide) | 0.003422 | -- | N2O (Nitrous Oxide) | 0 | -- | HC-NM (Non-methane Hydrocarbon) | 0 | -- | NMOG (Non-methane organic gases) | 0 | -- | PM (Particulate Matter) | 0.0000113 | -- | HC-TOTAL (Total Hydrocarbon) | 0.0003295 | -- |  |
|            | Test Result Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Unrounded Test Result                                                                                                                                                        | Verify Calculated FE Equivalent Value (miles per gallon) |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | CO2 BAG 1 (Bag 1 Carbon Dioxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 490.2381592                                                                                                                                                                  | --                                                       |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | CO BAG 1 (Bag 1 Carbon Monoxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0.0572021                                                                                                                                                                    | --                                                       |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | FE BAG 1 (Bag 1 Fuel Economy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 999                                                                                                                                                                          | --                                                       |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | CH4 BAG 1 (Bag 1 Methane)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.0028442                                                                                                                                                                    | --                                                       |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | NMOG BAG 1 (Bag 1 Non-methane organic gases)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0                                                                                                                                                                            | --                                                       |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | CO2 BAG 2 (Bag 2 Carbon Dioxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 265.040863                                                                                                                                                                   | --                                                       |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | CO BAG 2 (Bag 2 Carbon Monoxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0.2329911                                                                                                                                                                    | --                                                       |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | FE BAG 2 (Bag 2 Fuel Economy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 999                                                                                                                                                                          | --                                                       |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | CH4 BAG 2 (Bag 2 Methane)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.00084                                                                                                                                                                      | --                                                       |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | NMOG BAG 2 (Bag 2 Non-methane organic gases)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0                                                                                                                                                                            | --                                                       |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | METHANE (CH4 - Methane)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.0012868                                                                                                                                                                    | --                                                       |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | CO (Carbon Monoxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.1938015                                                                                                                                                                    | --                                                       |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | DT-ASCR (Drive Trace Absolute Speed Change Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1.0171726                                                                                                                                                                    | --                                                       |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | DT-EER (Drive Trace Energy Economy Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -1.5198854                                                                                                                                                                   | --                                                       |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | DT-IWRR (Drive Trace Inertia Work Ratio Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3.3923833                                                                                                                                                                    | --                                                       |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | MFR FE (Manufacturer Fuel Economy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 999                                                                                                                                                                          | --                                                       |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | NOX (Nitrogen Oxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.003422                                                                                                                                                                     | --                                                       |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | N2O (Nitrous Oxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0                                                                                                                                                                            | --                                                       |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | HC-NM (Non-methane Hydrocarbon)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0                                                                                                                                                                            | --                                                       |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | NMOG (Non-methane organic gases)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0                                                                                                                                                                            | --                                                       |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | PM (Particulate Matter)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.0000113                                                                                                                                                                    | --                                                       |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | HC-TOTAL (Total Hydrocarbon)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.0003295                                                                                                                                                                    | --                                                       |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <table><tr><th>Test Result Name</th><th>Unrounded Test Result</th><th>Verify Calculated CO2</th></tr><tr><td>Carbon dioxide</td><td>315.2453918</td><td>--</td></tr></table> | Test Result Name                                         | Unrounded Test Result                                    | Verify Calculated CO2            | Carbon dioxide | 315.2453918 | --                               |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | Test Result Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Unrounded Test Result                                                                                                                                                        | Verify Calculated CO2                                    |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | Carbon dioxide                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 315.2453918                                                                                                                                                                  | --                                                       |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |
|            | Manufacturer Test Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | None Unrounded Result for the following test results were modified by Verify: MFR FE, FE BAG 2, FE BAG 1                                                                     |                                                          |                                                          |                                  |                |             |                                  |           |    |                               |     |    |                           |           |    |                                              |   |    |                                  |            |    |                                  |           |    |                               |     |    |                           |         |    |                                              |   |    |                         |           |    |                      |           |    |                                                    |           |    |                                            |            |    |                                                 |           |    |                                    |     |    |                      |          |    |                     |   |    |                                 |   |    |                                  |   |    |                         |           |    |                              |           |    |  |

## Certification Summary Information Report

| Test Group           |               | VKMXV02.5DR3              |               |                |     | Evaporative/Refueling Family |                          |        |         | VKMXR0131DRG        |          |           |
|----------------------|---------------|---------------------------|---------------|----------------|-----|------------------------------|--------------------------|--------|---------|---------------------|----------|-----------|
| Certification Region | Useful Life   | Standard Level            | Emission Name | Rounded Result | RAF | NMOG/NM HC Ratio             | Diesel Adjustment Factor | Add DF | Mult DF | Certification Level | Standard | Pass/Fail |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | CO            | 0.1938         | --  | --                           | --                       | 0.16   | --      | 0.354               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | NMOG          | 0.0000         | --  | 1.03                         | --                       | 0.0042 | --      | 0.004               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | NOX           | 0.0034         | --  | --                           | --                       | 0.0033 | --      | 0.007               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | PM            | 0.0000         | --  | --                           | --                       | 0.0000 | --      | 0.000               | 0.006    | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | CO            | 0.19           | --  | --                           | --                       | 0.16   | --      | 0.4                 | 9.6      | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | NMOG          | 0.0000         | --  | 1.03                         | --                       | 0.0042 | --      | 0.004               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | NMOG+NOX      | 0.0034         | --  | --                           | --                       | --     | --      | 0.011               | 0.036    | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | NOX           | 0.0034         | --  | --                           | --                       | 0.0033 | --      | 0.007               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | PM            | 0.0000         | --  | --                           | --                       | 0.0000 | --      | 0.000               | 0.006    | Pass      |

## Certification Summary Information Report

| Test Group                                     | VKMXV02.5DR3                              | Evaporative/Refueling Family          | VKMXR0131DRG                                       |
|------------------------------------------------|-------------------------------------------|---------------------------------------|----------------------------------------------------|
| <b>Test #</b>                                  | <b>VKMX10092924</b>                       | <b>Test Procedure</b>                 | <b>95 - SC03</b>                                   |
| <b>Exhaust Test # for this Evap Test</b>       | --                                        | <b>Test Fuel Type</b>                 | 48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.) |
| <b>Test Date</b>                               | 12/08/2025                                | <b>Fuel</b>                           | Gasoline                                           |
| <b>Fuel Batch ID</b>                           | 25T-03                                    | <b>Fuel Calibration Number</b>        | 1                                                  |
| <b>Vehicle Class</b>                           | LDV/Passenger Car                         | <b>DF Type</b>                        | Mfr. Determined                                    |
| <b>Verify Test Lab ID</b>                      | 772-1, Jangduck-Dong                      |                                       |                                                    |
| <b>E10 Evaporative Test Measurement Method</b> | --                                        |                                       |                                                    |
| <b>Test Start Odometer Reading</b>             | 4189                                      | <b>Odometer Units</b>                 | M                                                  |
| <b>4WD Test Dyno</b>                           | No                                        | <b>Diesel Adjustment Factor Usage</b> | --                                                 |
| <b>State of Charge Delta</b>                   | --                                        |                                       |                                                    |
| <b>Drive Cycle Speed Tolerance Criteria</b>    | Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec) | <b>Road Speed Fan Usage</b>           | Yes                                                |

## Test Results

| Test Result Name                                   | Unrounded Test Result | Verify Calculated FE Equivalent Value (miles per gallon) |
|----------------------------------------------------|-----------------------|----------------------------------------------------------|
| METHANE (CH4 - Methane)                            | 0.002                 | --                                                       |
| CO (Carbon Monoxide)                               | 0.31                  | --                                                       |
| DT-ASCR (Drive Trace Absolute Speed Change Rating) | -0.37                 | --                                                       |
| DT-EER (Drive Trace Energy Economy Rating)         | -0.35                 | --                                                       |
| DT-IWRR (Drive Trace Inertia Work Ratio Rating)    | 1.52                  | --                                                       |
| MFR FE (Manufacturer Fuel Economy)                 | 23.13                 | 23.13                                                    |
| NOX (Nitrogen Oxide)                               | 0.0023                | --                                                       |
| NMOG (Non-methane organic gases)                   | 0                     | --                                                       |
| HC-TOTAL (Total Hydrocarbon)                       | 0.001                 | --                                                       |

| Test Result Name | Unrounded Test Result | Verify Calculated CO2 |
|------------------|-----------------------|-----------------------|
| Carbon dioxide   | 375.457               | --                    |

**Manufacturer Test Comments** 27MY DL3 2.5 8AT AWD 18inch GPF (EDV) E10 SC03

## Certification Summary Information Report

| Test Group           |               | VKMXV02.5DR3              |               |                |     | Evaporative/Refueling Family |                          |        |         | VKMXR0131DRG        |          |           |
|----------------------|---------------|---------------------------|---------------|----------------|-----|------------------------------|--------------------------|--------|---------|---------------------|----------|-----------|
| Certification Region | Useful Life   | Standard Level            | Emission Name | Rounded Result | RAF | NMOG/NM HC Ratio             | Diesel Adjustment Factor | Add DF | Mult DF | Certification Level | Standard | Pass/Fail |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | CO            | 0.3100         | --  | --                           | --                       | 0.16   | --      | 0.470               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | NMOG          | 0.0000         | --  | 1.03                         | --                       | 0.0042 | --      | 0.004               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 Bin 30     | NOX           | 0.0023         | --  | --                           | --                       | 0.0033 | --      | 0.006               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | CO            | 0.31           | --  | --                           | --                       | 0.16   | --      | 0.5                 | 1.0      | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | NMOG          | 0.0000         | --  | 1.03                         | --                       | 0.0042 | --      | 0.004               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | NMOG+NOX      | 0.0023         | --  | --                           | --                       | --     | --      | 0.010               | 0.030    | Pass      |
| CA                   | 150,000 miles | California LEV-IV SULEV30 | NOX           | 0.0023         | --  | --                           | --                       | 0.0033 | --      | 0.006               | 99.999   | Pass      |

## Certification Summary Information Report

| Test Group                                                                | VKMXV02.5DR3                                       | Evaporative/Refueling Family                                              | VKMXR0131DRG |
|---------------------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------------------------------|--------------|
| <b>Fuel Properties</b>                                                    |                                                    |                                                                           |              |
| <b>Fuel Batch ID</b>                                                      | <b>18T-03</b>                                      | <b>Fuel Calibration Number</b>                                            | <b>1</b>     |
| <b>Test Fuel Type</b>                                                     | 48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.) | <b>Fuel Batch Calibration Date</b>                                        | 12/10/2018   |
| <b>Fuel Batch Calibration Effective Date</b>                              | 12/11/2018                                         | <b>Fuel Batch Calibration Ineffective Date</b>                            | 12/11/2021   |
| <b>Carbon Weight Fraction NMHC</b>                                        | --                                                 | <b>Carbon Weight Fraction HC</b>                                          | --           |
| <b>Exhaust Carbon Weight Fraction</b>                                     | --                                                 | <b>Fuel Methanol Volume Fraction</b>                                      | --           |
| <b>Fuel Density (grams/cubic ft)</b>                                      | --                                                 | <b>Fuel Specific Gravity</b>                                              | 0.745        |
| <b>Fuel Ethanol Volume Percent (%)</b>                                    | 10.1                                               | <b>Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)</b> | 17781        |
| <b>Fuel Net Heat of Combustion (E10) (MJ/kg)</b>                          | --                                                 | <b>Fuel Carbon Mass Fraction (E10)</b>                                    | --           |
| <b>Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)</b> | 0.83                                               | <b>Weight Fraction CO2</b>                                                | --           |
| <b>Fuel Batch ID</b>                                                      | <b>43732</b>                                       | <b>Fuel Calibration Number</b>                                            | <b>2</b>     |
| <b>Test Fuel Type</b>                                                     | 48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.) | <b>Fuel Batch Calibration Date</b>                                        | 06/13/2025   |
| <b>Fuel Batch Calibration Effective Date</b>                              | 06/13/2025                                         | <b>Fuel Batch Calibration Ineffective Date</b>                            | --           |
| <b>Carbon Weight Fraction NMHC</b>                                        | --                                                 | <b>Carbon Weight Fraction HC</b>                                          | --           |
| <b>Exhaust Carbon Weight Fraction</b>                                     | --                                                 | <b>Fuel Methanol Volume Fraction</b>                                      | --           |
| <b>Fuel Density (grams/cubic ft)</b>                                      | --                                                 | <b>Fuel Specific Gravity</b>                                              | 0.749        |
| <b>Fuel Ethanol Volume Percent (%)</b>                                    | 9.6                                                | <b>Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)</b> | 17885        |
| <b>Fuel Net Heat of Combustion (E10) (MJ/kg)</b>                          | 41.37                                              | <b>Fuel Carbon Mass Fraction (E10)</b>                                    | 0.83         |
| <b>Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)</b> | 0.828                                              | <b>Weight Fraction CO2</b>                                                | --           |
| <b>Fuel Batch ID</b>                                                      | <b>19E-02</b>                                      | <b>Fuel Calibration Number</b>                                            | <b>1</b>     |
| <b>Test Fuel Type</b>                                                     | 46 - CARB LEV3 E10 Regular Gasoline                | <b>Fuel Batch Calibration Date</b>                                        | 12/18/2018   |
| <b>Fuel Batch Calibration Effective Date</b>                              | 12/18/2018                                         | <b>Fuel Batch Calibration Ineffective Date</b>                            | 12/18/2021   |
| <b>Carbon Weight Fraction NMHC</b>                                        | --                                                 | <b>Carbon Weight Fraction HC</b>                                          | --           |
| <b>Exhaust Carbon Weight Fraction</b>                                     | --                                                 | <b>Fuel Methanol Volume Fraction</b>                                      | --           |
| <b>Fuel Density (grams/cubic ft)</b>                                      | --                                                 | <b>Fuel Specific Gravity</b>                                              | 0.751        |
| <b>Fuel Ethanol Volume Percent (%)</b>                                    | 9.7                                                | <b>Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)</b> | 17802        |
| <b>Fuel Net Heat of Combustion (E10) (MJ/kg)</b>                          | --                                                 | <b>Fuel Carbon Mass Fraction (E10)</b>                                    | --           |
| <b>Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0)</b> | 0.832                                              | <b>Weight Fraction CO2</b>                                                | --           |
| <b>Fuel Batch ID</b>                                                      | <b>25D-02</b>                                      | <b>Fuel Calibration Number</b>                                            | <b>1</b>     |
| <b>Test Fuel Type</b>                                                     | 28 - Cold CO E10 Regular Gasoline (Tier 3)         | <b>Fuel Batch Calibration Date</b>                                        | 06/19/2025   |
| <b>Fuel Batch Calibration Effective Date</b>                              | 07/23/2025                                         | <b>Fuel Batch Calibration Ineffective Date</b>                            | 07/23/2028   |
| <b>Carbon Weight Fraction NMHC</b>                                        | --                                                 | <b>Carbon Weight Fraction HC</b>                                          | --           |

## Certification Summary Information Report

| Test Group                                                         | VKMXV02.5DR3                                       | Evaporative/Refueling Family                                       | VKMXR0131DRG |
|--------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------------|--------------|
| Exhaust Carbon Weight Fraction                                     | --                                                 | Fuel Methanol Volume Fraction                                      | --           |
| Fuel Density (grams/cubic ft)                                      | --                                                 | Fuel Specific Gravity                                              | 0.736        |
| Fuel Ethanol Volume Percent (%)                                    | 9.8                                                | Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb) | --           |
| Fuel Net Heat of Combustion (E10) (MJ/kg)                          | 41.538                                             | Fuel Carbon Mass Fraction (E10)                                    | 0.826        |
| Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0) | --                                                 | Weight Fraction CO2                                                | --           |
| Fuel Batch ID                                                      | 29351                                              | Fuel Calibration Number                                            | 1            |
| Test Fuel Type                                                     | 61 - Tier 2 Cert Gasoline                          | Fuel Batch Calibration Date                                        | 05/03/2023   |
| Fuel Batch Calibration Effective Date                              | 05/03/2023                                         | Fuel Batch Calibration Ineffective Date                            | --           |
| Carbon Weight Fraction NMHC                                        | --                                                 | Carbon Weight Fraction HC                                          | --           |
| Exhaust Carbon Weight Fraction                                     | --                                                 | Fuel Methanol Volume Fraction                                      | --           |
| Fuel Density (grams/cubic ft)                                      | --                                                 | Fuel Specific Gravity                                              | 0.742        |
| Fuel Ethanol Volume Percent (%)                                    | --                                                 | Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb) | 18439        |
| Fuel Net Heat of Combustion (E10) (MJ/kg)                          | --                                                 | Fuel Carbon Mass Fraction (E10)                                    | --           |
| Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0) | 0.867                                              | Weight Fraction CO2                                                | --           |
| Fuel Batch ID                                                      | 25T-03                                             | Fuel Calibration Number                                            | 1            |
| Test Fuel Type                                                     | 48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.) | Fuel Batch Calibration Date                                        | 06/19/2025   |
| Fuel Batch Calibration Effective Date                              | 07/23/2025                                         | Fuel Batch Calibration Ineffective Date                            | 07/23/2028   |
| Carbon Weight Fraction NMHC                                        | --                                                 | Carbon Weight Fraction HC                                          | --           |
| Exhaust Carbon Weight Fraction                                     | --                                                 | Fuel Methanol Volume Fraction                                      | --           |
| Fuel Density (grams/cubic ft)                                      | --                                                 | Fuel Specific Gravity                                              | 0.743        |
| Fuel Ethanol Volume Percent (%)                                    | 9.8                                                | Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb) | --           |
| Fuel Net Heat of Combustion (E10) (MJ/kg)                          | 41.495                                             | Fuel Carbon Mass Fraction (E10)                                    | 0.828        |
| Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0) | --                                                 | Weight Fraction CO2                                                | --           |
| Fuel Batch ID                                                      | 26757                                              | Fuel Calibration Number                                            | 1            |
| Test Fuel Type                                                     | 46 - CARB LEV3 E10 Regular Gasoline                | Fuel Batch Calibration Date                                        | 07/27/2017   |
| Fuel Batch Calibration Effective Date                              | 07/27/2017                                         | Fuel Batch Calibration Ineffective Date                            | 07/27/2032   |
| Carbon Weight Fraction NMHC                                        | --                                                 | Carbon Weight Fraction HC                                          | --           |
| Exhaust Carbon Weight Fraction                                     | --                                                 | Fuel Methanol Volume Fraction                                      | --           |
| Fuel Density (grams/cubic ft)                                      | --                                                 | Fuel Specific Gravity                                              | 0.749        |
| Fuel Ethanol Volume Percent (%)                                    | 9.8                                                | Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb) | 17958        |
| Fuel Net Heat of Combustion (E10) (MJ/kg)                          | --                                                 | Fuel Carbon Mass Fraction (E10)                                    | --           |
| Fuel Blend Carbon Weight Fraction / Fuel Carbon Mass Fraction (E0) | 0.827                                              | Weight Fraction CO2                                                | --           |

## Certification Summary Information Report

|                   |               |                              |               |
|-------------------|---------------|------------------------------|---------------|
| <b>Test Group</b> | VKM XV02.5DR3 | Evaporative/Refueling Family | VKM XR0131DRG |
|                   |               |                              |               |

## Certification Summary Information Report

| Test Group                     |               | VKMXV02.5DR3                        |     |             | Evaporative/Refueling Family    |                                   |         | VKMXR0131DRG                            |        |
|--------------------------------|---------------|-------------------------------------|-----|-------------|---------------------------------|-----------------------------------|---------|-----------------------------------------|--------|
| 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 LEV-IV SULEV30               |        |
| Fuel                           |               | Gasoline                            |     |             | Test Procedure                  |                                   |         | SC03                                    |        |
| Useful Life                    | Emission Name | Rounded Result                      | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF                                  | Std    |
| 150,000 miles                  | CO            | --                                  | --  | --          | --                              | --                                | --      | 0.16                                    | 1.0    |
| 150,000 miles                  | NMOG          | --                                  | --  | 1.03        | --                              | --                                | --      | 0.0042                                  | 99.999 |
| 150,000 miles                  | NMOG+NOX      | --                                  | --  | --          | --                              | --                                | --      | 0                                       | 0.030  |
| 150,000 miles                  | NOX           | --                                  | --  | --          | --                              | --                                | --      | 0.0033                                  | 99.999 |
|                                |               |                                     |     |             |                                 |                                   |         |                                         |        |
| Cert Region                    |               | Federal                             |     |             | Cert/In-Use Code                |                                   |         | Cert                                    |        |
| Vehicle Class                  |               | LDV/Passenger Car                   |     |             | Standard Level                  |                                   |         | Federal Tier 3 Bin 30                   |        |
| Fuel                           |               | Gasoline                            |     |             | Test Procedure                  |                                   |         | Federal fuel 2-day exhaust (w/can load) |        |
| Useful Life                    | Emission Name | Rounded Result                      | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF                                  | Std    |
| 120,000 miles                  | CREE          | --                                  | --  | --          | --                              | --                                | --      | 0.204399                                | 999    |
| 120,000 miles                  | METHANE       | --                                  | --  | --          | --                              | --                                | --      | 0.0019                                  | 0.030  |
| 120,000 miles                  | N2O           | --                                  | --  | --          | --                              | --                                | --      | 0.0011                                  | 0.010  |
| 150,000 miles                  | CO            | --                                  | --  | --          | --                              | --                                | --      | 0.16                                    | 1.0    |
| 150,000 miles                  | CO-COMP       | --                                  | --  | --          | --                              | --                                | --      | 0                                       | 4.2    |
| 150,000 miles                  | HCHO          | --                                  | --  | --          | --                              | --                                | --      | --                                      | 0.004  |
| 150,000 miles                  | NMOG          | --                                  | --  | 1.10        | --                              | --                                | --      | 0.0042                                  | 99.999 |
| 150,000 miles                  | NMOG+NOX      | --                                  | --  | --          | --                              | --                                | --      | 0                                       | 0.030  |
| 150,000 miles                  | NMOG+NOX-COMP | --                                  | --  | --          | --                              | --                                | --      | 0                                       | 0.030  |
| 150,000 miles                  | NOX           | --                                  | --  | --          | --                              | --                                | --      | 0.0033                                  | 99.999 |
| 150,000 miles                  | PM            | --                                  | --  | --          | --                              | --                                | --      | 0.0000                                  | 0.003  |
|                                |               |                                     |     |             |                                 |                                   |         |                                         |        |

## Certification Summary Information Report

|                      |                      |                                     |            |                    |                                        |                                          |                |                           |            |
|----------------------|----------------------|-------------------------------------|------------|--------------------|----------------------------------------|------------------------------------------|----------------|---------------------------|------------|
| <b>Test Group</b>    |                      | VKMXV02.5DR3                        |            |                    | Evaporative/Refueling Family           |                                          |                | VKMXR0131DRG              |            |
| <b>Cert Region</b>   |                      | California + CAA Section 177 states |            |                    | <b>Cert/In-Use Code</b>                |                                          |                | Cert                      |            |
| <b>Vehicle Class</b> |                      | LDV/Passenger Car                   |            |                    | <b>Standard Level</b>                  |                                          |                | California LEV-IV SULEV30 |            |
| <b>Fuel</b>          |                      | Gasoline                            |            |                    | <b>Test Procedure</b>                  |                                          |                | Fed. fuel 50 F exh.       |            |
| <b>Useful Life</b>   | <b>Emission Name</b> | <b>Rounded Result</b>               | <b>RAF</b> | <b>NMOG / NMHC</b> | <b>Upward Diesel Adjustment Factor</b> | <b>Downward Diesel Adjustment Factor</b> | <b>Mult DF</b> | <b>Add DF</b>             | <b>Std</b> |
| 4,000 miles          | CO                   | --                                  | --         | --                 | --                                     | --                                       | --             | 0                         | 1.0        |
| 4,000 miles          | HCHO                 | --                                  | --         | --                 | --                                     | --                                       | --             | --                        | 0.008      |
| 4,000 miles          | NMOG                 | --                                  | --         | 1.10               | --                                     | --                                       | --             | 0                         | 99.999     |
| 4,000 miles          | NMOG+NOX             | --                                  | --         | --                 | --                                     | --                                       | --             | 0                         | 0.060      |
| 4,000 miles          | NOX                  | --                                  | --         | --                 | --                                     | --                                       | --             | 0                         | 99.999     |

|                      |                      |                       |            |                    |                                        |                                          |                |                                  |            |
|----------------------|----------------------|-----------------------|------------|--------------------|----------------------------------------|------------------------------------------|----------------|----------------------------------|------------|
| <b>Cert Region</b>   |                      | Federal               |            |                    | <b>Cert/In-Use Code</b>                |                                          |                | Cert                             |            |
| <b>Vehicle Class</b> |                      | LDV/Passenger Car     |            |                    | <b>Standard Level</b>                  |                                          |                | Federal Tier 3 Bin 30            |            |
| <b>Fuel</b>          |                      | Gasoline              |            |                    | <b>Test Procedure</b>                  |                                          |                | CVS 75 and later (w/o can. load) |            |
| <b>Useful Life</b>   | <b>Emission Name</b> | <b>Rounded Result</b> | <b>RAF</b> | <b>NMOG / NMHC</b> | <b>Upward Diesel Adjustment Factor</b> | <b>Downward Diesel Adjustment Factor</b> | <b>Mult DF</b> | <b>Add DF</b>                    | <b>Std</b> |
| 120,000 miles        | CREE                 | --                    | --         | --                 | --                                     | --                                       | --             | 0                                | 999        |
| 120,000 miles        | METHANE              | --                    | --         | --                 | --                                     | --                                       | --             | 0.0019                           | 0.030      |
| 120,000 miles        | N2O                  | --                    | --         | --                 | --                                     | --                                       | --             | 0.0011                           | 0.010      |
| 150,000 miles        | CO                   | --                    | --         | --                 | --                                     | --                                       | --             | 0.16                             | 1.0        |
| 150,000 miles        | CO-COMP              | --                    | --         | --                 | --                                     | --                                       | --             | 0                                | 4.2        |
| 150,000 miles        | HCHO                 | --                    | --         | --                 | --                                     | --                                       | --             | --                               | 0.004      |
| 150,000 miles        | NMOG                 | --                    | --         | 1.10               | --                                     | --                                       | --             | 0.0042                           | 99.999     |
| 150,000 miles        | NMOG+NOX             | --                    | --         | 1.10               | --                                     | --                                       | --             | 0                                | 0.030      |
| 150,000 miles        | NMOG+NOX-COMP        | --                    | --         | --                 | --                                     | --                                       | --             | 0                                | 0.030      |
| 150,000 miles        | NOX                  | --                    | --         | --                 | --                                     | --                                       | --             | 0.0033                           | 99.999     |
| 150,000 miles        | PM                   | --                    | --         | --                 | --                                     | --                                       | --             | 0.0000                           | 0.003      |

## Certification Summary Information Report

|                      |                      |                       |            |                    |                                        |                                          |                |                       |            |
|----------------------|----------------------|-----------------------|------------|--------------------|----------------------------------------|------------------------------------------|----------------|-----------------------|------------|
| <b>Test Group</b>    | VKMXV02.5DR3         |                       |            |                    | Evaporative/Refueling Family           |                                          |                | VKMXR0131DRG          |            |
| <b>Cert Region</b>   | Federal              |                       |            |                    | <b>Cert/In-Use Code</b>                |                                          |                | Cert                  |            |
| <b>Vehicle Class</b> | LDV/Passenger Car    |                       |            |                    | <b>Standard Level</b>                  |                                          |                | Federal Tier 3 Bin 30 |            |
| <b>Fuel</b>          | Gasoline             |                       |            |                    | <b>Test Procedure</b>                  |                                          |                | US06                  |            |
| <b>Useful Life</b>   | <b>Emission Name</b> | <b>Rounded Result</b> | <b>RAF</b> | <b>NMOG / NMHC</b> | <b>Upward Diesel Adjustment Factor</b> | <b>Downward Diesel Adjustment Factor</b> | <b>Mult DF</b> | <b>Add DF</b>         | <b>Std</b> |
| 150,000 miles        | CO                   | --                    | --         | --                 | --                                     | --                                       | --             | 0.16                  | 99.999     |
| 150,000 miles        | NMOG                 | --                    | --         | 1.03               | --                                     | --                                       | --             | 0.0042                | 99.999     |
| 150,000 miles        | NOX                  | --                    | --         | --                 | --                                     | --                                       | --             | 0.0033                | 99.999     |
| 150,000 miles        | PM                   | --                    | --         | --                 | --                                     | --                                       | --             | 0.0000                | 0.006      |

|                      |                                     |                       |            |                    |                                        |                                          |                |                           |            |
|----------------------|-------------------------------------|-----------------------|------------|--------------------|----------------------------------------|------------------------------------------|----------------|---------------------------|------------|
| <b>Cert Region</b>   | California + CAA Section 177 states |                       |            |                    | <b>Cert/In-Use Code</b>                |                                          |                | Cert                      |            |
| <b>Vehicle Class</b> | LDV/Passenger Car                   |                       |            |                    | <b>Standard Level</b>                  |                                          |                | California LEV-IV SULEV30 |            |
| <b>Fuel</b>          | Gasoline                            |                       |            |                    | <b>Test Procedure</b>                  |                                          |                | Quick-Driveway (QD)       |            |
| <b>Useful Life</b>   | <b>Emission Name</b>                | <b>Rounded Result</b> | <b>RAF</b> | <b>NMOG / NMHC</b> | <b>Upward Diesel Adjustment Factor</b> | <b>Downward Diesel Adjustment Factor</b> | <b>Mult DF</b> | <b>Add DF</b>             | <b>Std</b> |
| 150,000 miles        | NMOG                                | --                    | --         | 1.10               | --                                     | --                                       | --             | 0.0084                    | 99.999     |
| 150,000 miles        | NMOG+NOX                            | --                    | --         | 1.10               | --                                     | --                                       | --             | 0                         | 0.042      |
| 150,000 miles        | NOX                                 | --                    | --         | --                 | --                                     | --                                       | --             | 0.0048                    | 99.999     |

|                      |                                     |                       |            |                    |                                        |                                          |                |                           |            |
|----------------------|-------------------------------------|-----------------------|------------|--------------------|----------------------------------------|------------------------------------------|----------------|---------------------------|------------|
| <b>Cert Region</b>   | California + CAA Section 177 states |                       |            |                    | <b>Cert/In-Use Code</b>                |                                          |                | Cert                      |            |
| <b>Vehicle Class</b> | LDV/Passenger Car                   |                       |            |                    | <b>Standard Level</b>                  |                                          |                | California LEV-IV SULEV30 |            |
| <b>Fuel</b>          | Gasoline                            |                       |            |                    | <b>Test Procedure</b>                  |                                          |                | Cold CO                   |            |
| <b>Useful Life</b>   | <b>Emission Name</b>                | <b>Rounded Result</b> | <b>RAF</b> | <b>NMOG / NMHC</b> | <b>Upward Diesel Adjustment Factor</b> | <b>Downward Diesel Adjustment Factor</b> | <b>Mult DF</b> | <b>Add DF</b>             | <b>Std</b> |
| 50,000 miles         | CO                                  | --                    | --         | --                 | --                                     | --                                       | --             | 0.05                      | 10.0       |

## Certification Summary Information Report

|                      |                                     |                       |            |                    |                                        |                                          |                |                                         |            |
|----------------------|-------------------------------------|-----------------------|------------|--------------------|----------------------------------------|------------------------------------------|----------------|-----------------------------------------|------------|
| <b>Test Group</b>    | VKMXV02.5DR3                        |                       |            |                    | Evaporative/Refueling Family           |                                          |                | VKMXR0131DRG                            |            |
| <b>Cert Region</b>   | California + CAA Section 177 states |                       |            |                    | <b>Cert/In-Use Code</b>                |                                          |                | Cert                                    |            |
| <b>Vehicle Class</b> | LDV/Passenger Car                   |                       |            |                    | <b>Standard Level</b>                  |                                          |                | California LEV-IV SULEV30               |            |
| <b>Fuel</b>          | Gasoline                            |                       |            |                    | <b>Test Procedure</b>                  |                                          |                | CVS 75 and later (w/o can. load)        |            |
| <b>Useful Life</b>   | <b>Emission Name</b>                | <b>Rounded Result</b> | <b>RAF</b> | <b>NMOG / NMHC</b> | <b>Upward Diesel Adjustment Factor</b> | <b>Downward Diesel Adjustment Factor</b> | <b>Mult DF</b> | <b>Add DF</b>                           | <b>Std</b> |
| 150,000 miles        | CO                                  | --                    | --         | --                 | --                                     | --                                       | --             | 0.16                                    | 1.0        |
| 150,000 miles        | HCHO                                | --                    | --         | --                 | --                                     | --                                       | --             | --                                      | 0.004      |
| 150,000 miles        | NMOG                                | --                    | --         | 1.10               | --                                     | --                                       | --             | 0.0042                                  | 99.999     |
| 150,000 miles        | NMOG+NOX                            | --                    | --         | 1.10               | --                                     | --                                       | --             | 0                                       | 0.030      |
| 150,000 miles        | NOX                                 | --                    | --         | --                 | --                                     | --                                       | --             | 0.0033                                  | 99.999     |
| 150,000 miles        | PM                                  | --                    | --         | --                 | --                                     | --                                       | --             | 0.0000                                  | 0.001      |
| <b>Cert Region</b>   | California + CAA Section 177 states |                       |            |                    | <b>Cert/In-Use Code</b>                |                                          |                | Cert                                    |            |
| <b>Vehicle Class</b> | LDV/Passenger Car                   |                       |            |                    | <b>Standard Level</b>                  |                                          |                | California LEV-IV SULEV30               |            |
| <b>Fuel</b>          | Gasoline                            |                       |            |                    | <b>Test Procedure</b>                  |                                          |                | US06                                    |            |
| <b>Useful Life</b>   | <b>Emission Name</b>                | <b>Rounded Result</b> | <b>RAF</b> | <b>NMOG / NMHC</b> | <b>Upward Diesel Adjustment Factor</b> | <b>Downward Diesel Adjustment Factor</b> | <b>Mult DF</b> | <b>Add DF</b>                           | <b>Std</b> |
| 150,000 miles        | CO                                  | --                    | --         | --                 | --                                     | --                                       | --             | 0.16                                    | 9.6        |
| 150,000 miles        | NMOG                                | --                    | --         | 1.03               | --                                     | --                                       | --             | 0.0042                                  | 99.999     |
| 150,000 miles        | NMOG+NOX                            | --                    | --         | --                 | --                                     | --                                       | --             | 0                                       | 0.036      |
| 150,000 miles        | NOX                                 | --                    | --         | --                 | --                                     | --                                       | --             | 0.0033                                  | 99.999     |
| 150,000 miles        | PM                                  | --                    | --         | --                 | --                                     | --                                       | --             | 0.0000                                  | 0.006      |
| <b>Cert Region</b>   | California + CAA Section 177 states |                       |            |                    | <b>Cert/In-Use Code</b>                |                                          |                | Cert                                    |            |
| <b>Vehicle Class</b> | LDV/Passenger Car                   |                       |            |                    | <b>Standard Level</b>                  |                                          |                | California LEV-IV SULEV30               |            |
| <b>Fuel</b>          | Gasoline                            |                       |            |                    | <b>Test Procedure</b>                  |                                          |                | Federal fuel 2-day exhaust (w/can load) |            |
| <b>Useful Life</b>   | <b>Emission Name</b>                | <b>Rounded Result</b> | <b>RAF</b> | <b>NMOG / NMHC</b> | <b>Upward Diesel Adjustment Factor</b> | <b>Downward Diesel Adjustment Factor</b> | <b>Mult DF</b> | <b>Add DF</b>                           | <b>Std</b> |
| 150,000 miles        | CO                                  | --                    | --         | --                 | --                                     | --                                       | --             | 0.16                                    | 1.0        |
| 150,000 miles        | HCHO                                | --                    | --         | --                 | --                                     | --                                       | --             | --                                      | 0.004      |
| 150,000 miles        | NMOG                                | --                    | --         | 1.10               | --                                     | --                                       | --             | 0.0042                                  | 99.999     |
| 150,000 miles        | NMOG+NOX                            | --                    | --         | --                 | --                                     | --                                       | --             | 0                                       | 0.030      |
| 150,000 miles        | NOX                                 | --                    | --         | --                 | --                                     | --                                       | --             | 0.0033                                  | 99.999     |
| 150,000 miles        | PM                                  | --                    | --         | --                 | --                                     | --                                       | --             | 0.0000                                  | 0.001      |

## Certification Summary Information Report

| Test Group           |               | VKMXV02.5DR3                        |     |             | Evaporative/Refueling Family    |                                   |         | VKMXR0131DRG              |        |
|----------------------|---------------|-------------------------------------|-----|-------------|---------------------------------|-----------------------------------|---------|---------------------------|--------|
| <b>Cert Region</b>   |               | California + CAA Section 177 states |     |             | <b>Cert/In-Use Code</b>         |                                   |         | Cert                      |        |
| <b>Vehicle Class</b> |               | LDV/Passenger Car                   |     |             | <b>Standard Level</b>           |                                   |         | California LEV-IV SULEV30 |        |
| <b>Fuel</b>          |               | Gasoline                            |     |             | <b>Test Procedure</b>           |                                   |         | HWFE                      |        |
| Useful Life          | Emission Name | Rounded Result                      | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF                    | Std    |
| 150,000 miles        | NMOG          | --                                  | --  | 1.03        | --                              | --                                | --      | 0.0042                    | 99.999 |
| 150,000 miles        | NMOG+NOX      | --                                  | --  | --          | --                              | --                                | --      | 0                         | 0.030  |
| 150,000 miles        | NOX           | --                                  | --  | --          | --                              | --                                | --      | 0.0033                    | 99.999 |
| <b>Cert Region</b>   |               | Federal                             |     |             | <b>Cert/In-Use Code</b>         |                                   |         | Cert                      |        |
| <b>Vehicle Class</b> |               | LDV/Passenger Car                   |     |             | <b>Standard Level</b>           |                                   |         | Federal Tier 3 Bin 30     |        |
| <b>Fuel</b>          |               | Gasoline                            |     |             | <b>Test Procedure</b>           |                                   |         | Cold CO                   |        |
| Useful Life          | Emission Name | Rounded Result                      | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF                    | Std    |
| 50,000 miles         | CO            | --                                  | --  | --          | --                              | --                                | --      | 0.05                      | 10.0   |
| 120,000 miles        | HC-NM         | --                                  | --  | --          | --                              | --                                | --      | 0.0030                    | 0.3    |
| <b>Cert Region</b>   |               | Federal                             |     |             | <b>Cert/In-Use Code</b>         |                                   |         | Cert                      |        |
| <b>Vehicle Class</b> |               | LDV/Passenger Car                   |     |             | <b>Standard Level</b>           |                                   |         | Federal Tier 3 Bin 30     |        |
| <b>Fuel</b>          |               | Gasoline                            |     |             | <b>Test Procedure</b>           |                                   |         | SC03                      |        |
| Useful Life          | Emission Name | Rounded Result                      | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF                    | Std    |
| 150,000 miles        | CO            | --                                  | --  | --          | --                              | --                                | --      | 0.16                      | 99.999 |
| 150,000 miles        | NMOG          | --                                  | --  | 1.03        | --                              | --                                | --      | 0.0042                    | 99.999 |
| 150,000 miles        | NOX           | --                                  | --  | --          | --                              | --                                | --      | 0.0033                    | 99.999 |

## Certification Summary Information Report

|                      |                      |                       |            |                              |                                        |                                          |                |               |            |
|----------------------|----------------------|-----------------------|------------|------------------------------|----------------------------------------|------------------------------------------|----------------|---------------|------------|
| <b>Test Group</b>    | VKMXV02.5DR3         |                       |            | Evaporative/Refueling Family |                                        |                                          | VKMXR0131DRG   |               |            |
| <b>Cert Region</b>   | Federal              |                       |            | <b>Cert/In-Use Code</b>      | Cert                                   |                                          |                |               |            |
| <b>Vehicle Class</b> | LDV/Passenger Car    |                       |            | <b>Standard Level</b>        | Federal Tier 3 Bin 30                  |                                          |                |               |            |
| <b>Fuel</b>          | Gasoline             |                       |            | <b>Test Procedure</b>        | HWFE                                   |                                          |                |               |            |
| <b>Useful Life</b>   | <b>Emission Name</b> | <b>Rounded Result</b> | <b>RAF</b> | <b>NMOG / NMHC</b>           | <b>Upward Diesel Adjustment Factor</b> | <b>Downward Diesel Adjustment Factor</b> | <b>Mult DF</b> | <b>Add DF</b> | <b>Std</b> |
| 120,000 miles        | CREE                 | --                    | --         | --                           | --                                     | --                                       | --             | 0.204399      | 999        |
| 150,000 miles        | NMOG                 | --                    | --         | 1.03                         | --                                     | --                                       | --             | 0.0042        | 99.999     |
| 150,000 miles        | NMOG+NOX             | --                    | --         | --                           | --                                     | --                                       | --             | 0             | 0.030      |
| 150,000 miles        | NOX                  | --                    | --         | --                           | --                                     | --                                       | --             | 0.0033        | 99.999     |

## Evaporative/Refueling Standards

|                              |               |                                    |                |                |        |                                        |  |
|------------------------------|---------------|------------------------------------|----------------|----------------|--------|----------------------------------------|--|
| Evaporative/Refueling Family |               | VKMXR0131DRG                       |                | Cert Region    |        | California + CAA Section 177 states    |  |
| Cert/In-Use Code             |               | Cert                               |                | Standard Level |        | California LEV-IV Zero Evap (Option 2) |  |
| Test Procedure               |               | Federal fuel refueling test (ORVR) |                |                |        |                                        |  |
| Fuel                         | Useful Life   | Emission Name                      | Rounded Result | Std            | Add DF |                                        |  |
| Gasoline                     | 150,000 miles | HC-TOTAL-EQUIV                     | --             | 0.20           | 0      |                                        |  |

|                              |               |                                |                |                |        |                     |  |
|------------------------------|---------------|--------------------------------|----------------|----------------|--------|---------------------|--|
| Evaporative/Refueling Family |               | VKMXR0131DRG                   |                | Cert Region    |        | Federal             |  |
| Cert/In-Use Code             |               | Cert                           |                | Standard Level |        | Federal Tier 3 Evap |  |
| Test Procedure               |               | Leak Test - Port Near Canister |                |                |        |                     |  |
| Fuel                         | Useful Life   | Emission Name                  | Rounded Result | Std            | Add DF |                     |  |
| Gasoline                     | 150,000 miles | LEAK-DIA                       | --             | 0.020          | 0      |                     |  |

|                                     |                    |                              |                       |                     |               |
|-------------------------------------|--------------------|------------------------------|-----------------------|---------------------|---------------|
| <b>Evaporative/Refueling Family</b> |                    | VKMXR0131DRG                 | <b>Cert Region</b>    | Federal             |               |
| <b>Cert/In-Use Code</b>             |                    | Cert                         | <b>Standard Level</b> | Federal Tier 3 Evap |               |
| <b>Test Procedure</b>               |                    | California Fuel Running Loss |                       |                     |               |
| <b>Fuel</b>                         | <b>Useful Life</b> | <b>Emission Name</b>         | <b>Rounded Result</b> | <b>Std</b>          | <b>Add DF</b> |
| Gasoline                            | 150,000 miles      | HC-TOTAL-EQUIV               | --                    | 0.05                | 0             |

|                              |               |                                |                |                |        |                                        |  |
|------------------------------|---------------|--------------------------------|----------------|----------------|--------|----------------------------------------|--|
| Evaporative/Refueling Family |               | VKMXR0131DRG                   |                | Cert Region    |        | California + CAA Section 177 states    |  |
| Cert/In-Use Code             |               | Cert                           |                | Standard Level |        | California LEV-IV Zero Evap (Option 2) |  |
| Test Procedure               |               | Leak Test - Port Near Canister |                |                |        |                                        |  |
| Fuel                         | Useful Life   | Emission Name                  | Rounded Result | Std            | Add DF |                                        |  |
| Gasoline                     | 150,000 miles | LEAK-DIA                       | --             | 0.02           | 0      |                                        |  |

## Certification Summary Information Report

|                                     |                                    |                      |                                     |                                                                               |               |
|-------------------------------------|------------------------------------|----------------------|-------------------------------------|-------------------------------------------------------------------------------|---------------|
| <b>Test Group</b>                   | VKMXV02.5DR3                       |                      | <b>Evaporative/Refueling Family</b> | VKMXR0131DRG                                                                  |               |
| <b>Evaporative/Refueling Family</b> | VKMXR0131DRG                       |                      | <b>Cert Region</b>                  | California + CAA Section 177 states<br>California LEV-IV Zero Evap (Option 2) |               |
| <b>Cert/In-Use Code</b>             | Cert                               |                      | <b>Standard Level</b>               |                                                                               |               |
| <b>Test Procedure</b>               | California Fuel Running Loss       |                      |                                     |                                                                               |               |
| <b>Fuel</b>                         | <b>Useful Life</b>                 | <b>Emission Name</b> | <b>Rounded Result</b>               | <b>Std</b>                                                                    | <b>Add DF</b> |
| Gasoline                            | 150,000 miles                      | HC-TOTAL-EQUIV       | --                                  | 0.01                                                                          | 0             |
| <b>Evaporative/Refueling Family</b> | VKMXR0131DRG                       |                      | <b>Cert Region</b>                  | Federal                                                                       |               |
| <b>Cert/In-Use Code</b>             | Cert                               |                      | <b>Standard Level</b>               | Federal Tier 3 Evap                                                           |               |
| <b>Test Procedure</b>               | Leak Test - Port Near Fuel Pipe    |                      |                                     |                                                                               |               |
| <b>Fuel</b>                         | <b>Useful Life</b>                 | <b>Emission Name</b> | <b>Rounded Result</b>               | <b>Std</b>                                                                    | <b>Add DF</b> |
| Gasoline                            | 150,000 miles                      | LEAK-DIA             | --                                  | 0.020                                                                         | 0             |
| <b>Evaporative/Refueling Family</b> | VKMXR0131DRG                       |                      | <b>Cert Region</b>                  | California + CAA Section 177 states<br>California LEV-IV Zero Evap (Option 2) |               |
| <b>Cert/In-Use Code</b>             | Cert                               |                      | <b>Standard Level</b>               |                                                                               |               |
| <b>Test Procedure</b>               | CA fuel 3-day evap.                |                      |                                     |                                                                               |               |
| <b>Fuel</b>                         | <b>Useful Life</b>                 | <b>Emission Name</b> | <b>Rounded Result</b>               | <b>Std</b>                                                                    | <b>Add DF</b> |
| Gasoline                            | 150,000 miles                      | HC-TOTAL-EQUIV       | --                                  | 0.300                                                                         | 0             |
| <b>Evaporative/Refueling Family</b> | VKMXR0131DRG                       |                      | <b>Cert Region</b>                  | California + CAA Section 177 states<br>California LEV-IV Zero Evap (Option 2) |               |
| <b>Cert/In-Use Code</b>             | Cert                               |                      | <b>Standard Level</b>               |                                                                               |               |
| <b>Test Procedure</b>               | California fuel 2-day evap         |                      |                                     |                                                                               |               |
| <b>Fuel</b>                         | <b>Useful Life</b>                 | <b>Emission Name</b> | <b>Rounded Result</b>               | <b>Std</b>                                                                    | <b>Add DF</b> |
| Gasoline                            | 150,000 miles                      | HC-TOTAL-EQUIV       | --                                  | 0.300                                                                         | 0             |
| <b>Evaporative/Refueling Family</b> | VKMXR0131DRG                       |                      | <b>Cert Region</b>                  | Federal                                                                       |               |
| <b>Cert/In-Use Code</b>             | Cert                               |                      | <b>Standard Level</b>               | Federal Tier 3 Evap                                                           |               |
| <b>Test Procedure</b>               | Federal fuel refueling test (ORVR) |                      |                                     |                                                                               |               |
| <b>Fuel</b>                         | <b>Useful Life</b>                 | <b>Emission Name</b> | <b>Rounded Result</b>               | <b>Std</b>                                                                    | <b>Add DF</b> |
| Gasoline                            | 150,000 miles                      | HC-TOTAL-EQUIV       | --                                  | 0.20                                                                          | 0             |

## Certification Summary Information Report

|                              |               |                                 |                |                              |        |                                        |  |
|------------------------------|---------------|---------------------------------|----------------|------------------------------|--------|----------------------------------------|--|
| Test Group                   |               | VKMXV02.5DR3                    |                | Evaporative/Refueling Family |        | VKMXR0131DRG                           |  |
| Evaporative/Refueling Family |               | VKMXR0131DRG                    |                | Cert Region                  |        | Federal                                |  |
| Cert/In-Use Code             |               | Cert                            |                | Standard Level               |        | Federal Tier 3 Evap                    |  |
| Test Procedure               |               | California fuel 2-day evap      |                |                              |        |                                        |  |
| Fuel                         | Useful Life   | Emission Name                   | Rounded Result | Std                          | Add DF |                                        |  |
| Gasoline                     | 150,000 miles | HC-TOTAL-EQUIV                  | --             | 0.300                        | 0      |                                        |  |
|                              |               |                                 |                |                              |        |                                        |  |
| Evaporative/Refueling Family |               | VKMXR0131DRG                    |                | Cert Region                  |        | California + CAA Section 177 states    |  |
| Cert/In-Use Code             |               | Cert                            |                | Standard Level               |        | California LEV-IV Zero Evap (Option 2) |  |
| Test Procedure               |               | Evap Canister Bleed Test        |                |                              |        |                                        |  |
| Fuel                         | Useful Life   | Emission Name                   | Rounded Result | Std                          | Add DF |                                        |  |
| Gasoline                     | 150,000 miles | HC-TOTAL                        | --             | 0.020                        | 0      |                                        |  |
|                              |               |                                 |                |                              |        |                                        |  |
| Evaporative/Refueling Family |               | VKMXR0131DRG                    |                | Cert Region                  |        | California + CAA Section 177 states    |  |
| Cert/In-Use Code             |               | Cert                            |                | Standard Level               |        | California LEV-IV Zero Evap (Option 2) |  |
| Test Procedure               |               | Leak Test - Port Near Fuel Pipe |                |                              |        |                                        |  |
| Fuel                         | Useful Life   | Emission Name                   | Rounded Result | Std                          | Add DF |                                        |  |
| Gasoline                     | 150,000 miles | LEAK-DIA                        | --             | 0.02                         | 0      |                                        |  |
|                              |               |                                 |                |                              |        |                                        |  |
| Evaporative/Refueling Family |               | VKMXR0131DRG                    |                | Cert Region                  |        | Federal                                |  |
| Cert/In-Use Code             |               | Cert                            |                | Standard Level               |        | Federal Tier 3 Evap                    |  |
| Test Procedure               |               | Evap Canister Bleed Test        |                |                              |        |                                        |  |
| Fuel                         | Useful Life   | Emission Name                   | Rounded Result | Std                          | Add DF |                                        |  |
| Gasoline                     | 150,000 miles | HC-TOTAL                        | --             | 0.020                        | 0      |                                        |  |
|                              |               |                                 |                |                              |        |                                        |  |
| Evaporative/Refueling Family |               | VKMXR0131DRG                    |                | Cert Region                  |        | Federal                                |  |
| Cert/In-Use Code             |               | Cert                            |                | Standard Level               |        | Federal Tier 3 Evap                    |  |
| Test Procedure               |               | CA fuel 3-day evap.             |                |                              |        |                                        |  |
| Fuel                         | Useful Life   | Emission Name                   | Rounded Result | Std                          | Add DF |                                        |  |
| Gasoline                     | 150,000 miles | HC-TOTAL-EQUIV                  | --             | 0.300                        | 0      |                                        |  |

## Certification Summary Information Report

| Test Group           |                                                                 | VKM XV02.5DR3      | Evaporative/Refueling Family                       | VKM XR0131DRG |
|----------------------|-----------------------------------------------------------------|--------------------|----------------------------------------------------|---------------|
| Glossary             |                                                                 |                    |                                                    |               |
| <b>Useful Life</b>   |                                                                 |                    |                                                    |               |
| 4                    | 4,000 miles                                                     | 120                | 120,000 miles                                      |               |
| 50                   | 50,000 miles                                                    | 150                | 150,000 miles                                      |               |
| 100                  | 100,000 miles                                                   |                    |                                                    |               |
| <b>Emission Name</b> |                                                                 |                    |                                                    |               |
| 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                             |                                                            | VKM XV02.5DR3 | Evaporative/Refueling Family |                                                 | VKM XR0131DRG |
|----------------------------------------|------------------------------------------------------------|---------------|------------------------------|-------------------------------------------------|---------------|
| 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                             |               |
| <b>Certification Region</b>            |                                                            |               |                              |                                                 |               |
| CA                                     | California + CAA Section 177 states                        |               | FA                           | Federal                                         |               |
| <b>Exhaust Emission Standard Level</b> |                                                            |               |                              |                                                 |               |
| 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                    |                                                                   | VKM XV02.5DR3 | Evaporative/Refueling Family                             |                            | VKM XR0131DRG |
|-------------------------------|-------------------------------------------------------------------|---------------|----------------------------------------------------------|----------------------------|---------------|
| 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                   |               |                                                          |                            |               |
| <b>Transmission Type Code</b> |                                                                   |               |                                                          |                            |               |
| 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) |                            |               |
| <b>Drive System Code</b>      |                                                                   |               |                                                          |                            |               |
| 4                             | 4-Wheel Drive                                                     | P             | Part-time 4-Wheel Drive                                  |                            |               |

Certification Summary Information Report

| Test Group                    |                                 | VKMXV02.5DR3 | Evaporative/Refueling Family |                                  | VKMXR0131DRG |
|-------------------------------|---------------------------------|--------------|------------------------------|----------------------------------|--------------|
| 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                     |              |