

## Certification Summary Information Report

|                                   |                    |                                     |                        |
|-----------------------------------|--------------------|-------------------------------------|------------------------|
| <b>Manufacturer</b>               | General Motors LLC | <b>Manufacturer Code</b>            | GMX                    |
| <b>Test Group</b>                 | VGMXD04.3170       | <b>Evaporative/Refueling Family</b> | VGMXR021260A           |
| <b>Certificate Number</b>         | VGMXD04.3170-013   | <b>CARB Executive Order #</b>       | --                     |
| <b>Certificate Issue Date</b>     | 07/07/2026         | <b>Certificate Revision Date</b>    | --                     |
| <b>Certificate Effective Date</b> | 07/07/2026         | <b>Conditional Certificate</b>      | No                     |
| <b>CSI Revision #</b>             | --                 | <b>CSI Submission/Revision Date</b> | 05/27/2026 11:40:45 AM |
| <b>Model Year</b>                 | 2027               |                                     |                        |

  

**Test Group Information**

|                          |                       |                                        |    |
|--------------------------|-----------------------|----------------------------------------|----|
| <b>CSI Type</b>          | Update for Correction | <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 fuel 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>                                   | M6, HDV1     |
| <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>                        | VGMXGPGNNB51           | <b>Durability Group Equivalency Factor</b>                 | 1            |
| <b>Reduced Fee Test Group</b>                       | No                     | <b>Certification Region Code(s)</b>                        | FA, CA       |
| <b>Complies with HD GHG 2b/3 regulations?</b>       | Yes                    |                                                            |              |
| <b>Introduction into Commerce Date</b>              | 08/31/2026             | <b>CAP2000 Conditional Certificate?</b>                    | No           |
| <b>Independent Commercial Importer?</b>             | No                     | <b>Alternative Fuel Converter Certificate?</b>             | No           |
| <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>                | VGMXD04.3170 |
| <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>                      | LV1 GMT610 FSV         |                                                            |              |
| <b>Mfr Exhaust / Evap Standards Comments</b>        | --                     |                                                            |              |

## Certification Summary Information Report

|                                                                             |                                                  |                                                           |                                |
|-----------------------------------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------|--------------------------------|
| <b>Test Group</b>                                                           | VGMXD04.3170                                     | <b>Evaporative/Refueling Family</b>                       | VGMXR021260A                   |
| <b>Evaporative/Refueling Family Information</b>                             |                                                  |                                                           |                                |
| <b>Evaporative Summary Information Type</b>                                 | New                                              | <b>Submission/Correction Date</b>                         | 05/15/2026 08:04:00 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>                     | Multi-layer with HDPE and EVOH |
| <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> | HCA                            |
| <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> | 214                                              | <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> |
| VGMXR021260A-LK1                                                            | 50 State                                         | 0.02                                                      | --                             |

## Certification Summary Information Report

| Test Group                         |               | VGMXD04.3170                       |                                     | Evaporative/Refueling Family |              | VGMXR021260A |                |
|------------------------------------|---------------|------------------------------------|-------------------------------------|------------------------------|--------------|--------------|----------------|
| Models Covered by this Certificate |               |                                    |                                     |                              |              |              |                |
| Carline Manufacturer               | Division      | Carline                            | Certification Region Code(s)        | Drive System                 | Trans - Type | - # of Gears | Trans - Lockup |
| General Motors LLC                 | 4 - GMC       | 964 - G3500 SAVANA 2WD PASS INCOM  | California + CAA Section 177 states | 2-Wheel Drive, Rear          | Automatic    | 8            | Yes            |
| General Motors LLC                 | 3 - Chevrolet | 43 - G2500 EXPRESS 2WD CARGO       | Federal                             | 2-Wheel Drive, Rear          | Automatic    | 8            | Yes            |
| General Motors LLC                 | 3 - Chevrolet | 27 - G3500 EXPRESS 2WD CARGO INCOM | Federal                             | 2-Wheel Drive, Rear          | Automatic    | 8            | Yes            |
| General Motors LLC                 | 4 - GMC       | 31 - G2500 SAVANA 2WD PASS         | California + CAA Section 177 states | 2-Wheel Drive, Rear          | Automatic    | 8            | Yes            |
| General Motors LLC                 | 4 - GMC       | 46 - G3500 SAVANA 2WD CARGO        | California + CAA Section 177 states | 2-Wheel Drive, Rear          | Automatic    | 8            | Yes            |
| General Motors LLC                 | 4 - GMC       | 963 - G3500 SAVANA 2WD CARGO INCOM | California + CAA Section 177 states | 2-Wheel Drive, Rear          | Automatic    | 8            | Yes            |
| General Motors LLC                 | 3 - Chevrolet | 43 - G2500 EXPRESS 2WD CARGO       | California + CAA Section 177 states | 2-Wheel Drive, Rear          | Automatic    | 8            | Yes            |
| General Motors LLC                 | 3 - Chevrolet | 56 - G3500 EXPRESS 2WD CARGO       | Federal                             | 2-Wheel Drive, Rear          | Automatic    | 8            | Yes            |
| General Motors LLC                 | 3 - Chevrolet | 56 - G3500 EXPRESS 2WD CARGO       | California + CAA Section 177 states | 2-Wheel Drive, Rear          | Automatic    | 8            | Yes            |
| General Motors LLC                 | 3 - Chevrolet | 28 - G3500 EXPRESS 2WD PASS INCOM  | Federal                             | 2-Wheel Drive, Rear          | Automatic    | 8            | Yes            |
| General Motors LLC                 | 3 - Chevrolet | 27 - G3500 EXPRESS 2WD CARGO INCOM | California + CAA Section 177 states | 2-Wheel Drive, Rear          | Automatic    | 8            | Yes            |
| General Motors LLC                 | 4 - GMC       | 42 - G3500 SAVANA 2WD PASS         | California + CAA Section 177 states | 2-Wheel Drive, Rear          | Automatic    | 8            | Yes            |
| General Motors LLC                 | 3 - Chevrolet | 41 - G2500 EXPRESS 2WD PASS        | Federal                             | 2-Wheel Drive, Rear          | Automatic    | 8            | Yes            |
| General Motors LLC                 | 3 - Chevrolet | 41 - G2500 EXPRESS 2WD PASS        | California + CAA Section 177 states | 2-Wheel Drive, Rear          | Automatic    | 8            | Yes            |
| General Motors LLC                 | 4 - GMC       | 963 - G3500 SAVANA 2WD CARGO INCOM | Federal                             | 2-Wheel Drive, Rear          | Automatic    | 8            | Yes            |
| General Motors LLC                 | 3 - Chevrolet | 52 - G3500 EXPRESS 2WD PASS        | California + CAA Section 177 states | 2-Wheel Drive, Rear          | Automatic    | 8            | Yes            |
| General Motors LLC                 | 4 - GMC       | 31 - G2500 SAVANA 2WD PASS         | Federal                             | 2-Wheel Drive, Rear          | Automatic    | 8            | Yes            |
| General Motors LLC                 | 4 - GMC       | 961 - G2500 SAVANA 2WD CARGO INCOM | California + CAA Section 177 states | 2-Wheel Drive, Rear          | Automatic    | 8            | Yes            |
| General Motors LLC                 | 4 - GMC       | 32 - G2500 SAVANA 2WD CARGO        | California + CAA Section 177 states | 2-Wheel Drive, Rear          | Automatic    | 8            | Yes            |
| General Motors LLC                 | 4 - GMC       | 42 - G3500 SAVANA 2WD PASS         | Federal                             | 2-Wheel Drive, Rear          | Automatic    | 8            | Yes            |
| General Motors LLC                 | 3 - Chevrolet | 25 - G2500 EXPRESS 2WD CARGO INCOM | California + CAA Section 177 states | 2-Wheel Drive, Rear          | Automatic    | 8            | Yes            |
| General Motors LLC                 | 3 - Chevrolet | 25 - G2500 EXPRESS 2WD CARGO INCOM | Federal                             | 2-Wheel Drive, Rear          | Automatic    | 8            | Yes            |

## Certification Summary Information Report

| Test Group         |               | VGMXD04.3170                          | Evaporative/Refueling Family           |                     |           | VGMXR021260A |     |
|--------------------|---------------|---------------------------------------|----------------------------------------|---------------------|-----------|--------------|-----|
| General Motors LLC | 3 - Chevrolet | 52 - G3500 EXPRESS<br>2WD PASS        | Federal                                | 2-Wheel Drive, Rear | Automatic | 8            | Yes |
| General Motors LLC | 4 - GMC       | 961 - G2500 SAVANA<br>2WD CARGO INCOM | Federal                                | 2-Wheel Drive, Rear | Automatic | 8            | Yes |
| General Motors LLC | 3 - Chevrolet | 28 - G3500 EXPRESS<br>2WD PASS INCOM  | California + CAA<br>Section 177 states | 2-Wheel Drive, Rear | Automatic | 8            | Yes |
| General Motors LLC | 4 - GMC       | 46 - G3500 SAVANA<br>2WD CARGO        | Federal                                | 2-Wheel Drive, Rear | Automatic | 8            | Yes |
| General Motors LLC | 4 - GMC       | 32 - G2500 SAVANA<br>2WD CARGO        | Federal                                | 2-Wheel Drive, Rear | Automatic | 8            | Yes |
| General Motors LLC | 4 - GMC       | 964 - G3500 SAVANA<br>2WD PASS INCOM  | Federal                                | 2-Wheel Drive, Rear | Automatic | 8            | Yes |

## Engine Description

**Hybrid Type** --  
**Engine Type** 4-Stroke Spark Ignition  
**Engine Block Arrangement** V-shaped engine  
**Camless Valvetrain Indicator** No  
**Number of Cylinders/Rotors** 6

**Hybrid Description** --  
**Mfr Engine Description** --  
**Mfr Engine Block Arrangement Description** --  
**Oil Viscosity/Classification** 5W30  
**Mechanically Variable Compression Ratio Indicator** N

## After Treatment Device(s) (ATD)

| ATD Number | ATD Type           | ATD Precious Metal  | Substrate Material | Substrate Construction |
|------------|--------------------|---------------------|--------------------|------------------------|
| 1          | Three-way catalyst | Palladium + Rhodium | Ceramic            | Monolith               |
| 2          | Three-way catalyst | Palladium + Rhodium | Ceramic            | Monolith               |
| 3          | Three-way catalyst | Palladium + Rhodium | Ceramic            | Monolith               |

## Mfr After Treatment Device (ATD)

**Comments** --  
**Direct Ozone Reduction (DOR) Device** Not Equipped  
**Mfr Emission Control Device Comments** --

## Certification Summary Information Report

| Test Group                               |              | VGMXD04.3170        |              |         | Evaporative/Refueling Family                     |                       |                           | VGMXR021260A             |                              |                       |  |
|------------------------------------------|--------------|---------------------|--------------|---------|--------------------------------------------------|-----------------------|---------------------------|--------------------------|------------------------------|-----------------------|--|
| Engine Configuration Number 1            |              |                     |              |         |                                                  |                       |                           |                          |                              |                       |  |
| Engine Displacement (liters)             |              | 4.3                 |              |         | Engine Rated Horsepower                          |                       |                           | 276                      |                              |                       |  |
| Number of Inlet Valves Per Cylinder      |              | 1                   |              |         | Number of Exhaust Valves Per Cylinder            |                       |                           | 1                        |                              |                       |  |
| Air Aspiration Method                    |              | Naturally Aspirated |              |         | Number of Air Aspiration Devices                 |                       |                           | 0                        |                              |                       |  |
| Air Aspiration Device Configuration      |              | --                  |              |         | Charge Air Cooler Type                           |                       |                           | N/A                      |                              |                       |  |
| Air Aspiration Drive Method(s)           |              | --                  |              |         |                                                  |                       |                           |                          |                              |                       |  |
| Cylinder Deactivation                    |              | No                  |              |         |                                                  |                       |                           |                          |                              |                       |  |
| Cylinder Deactivation Description        |              | --                  |              |         |                                                  |                       |                           |                          |                              |                       |  |
| Variable Valve Timing                    |              | Yes                 |              |         |                                                  |                       |                           |                          |                              |                       |  |
| Variable Valve Timing System Description |              | cam phaser          |              |         |                                                  |                       |                           |                          |                              |                       |  |
| Variable Valve Lift?                     |              | No                  |              |         |                                                  |                       |                           |                          |                              |                       |  |
| Variable Valve Lift System Description   |              | --                  |              |         |                                                  |                       |                           |                          |                              |                       |  |
| Number of Knock Sensors                  |              | 2                   |              |         | Number of Air/Fuel Sensors                       |                       |                           | 4                        |                              |                       |  |
| Air/Fuel Sensor # 1 Type                 |              | Heated oxygen       |              |         | Air/Fuel Sensor # 1 Description                  |                       |                           | --                       |                              |                       |  |
| Air/Fuel Sensor # 2 Type                 |              | Heated oxygen       |              |         | Air/Fuel Sensor # 2 Description                  |                       |                           | --                       |                              |                       |  |
| Air/Fuel Sensor # 3 Type                 |              | Heated oxygen       |              |         | Air/Fuel Sensor # 3 Description                  |                       |                           | --                       |                              |                       |  |
| Air/Fuel Sensor # 4 Type                 |              | Heated oxygen       |              |         | Air/Fuel Sensor # 4 Description                  |                       |                           | --                       |                              |                       |  |
| Mfr Air/Fuel Sensor Comments             |              | --                  |              |         |                                                  |                       |                           |                          |                              |                       |  |
| Exhaust Gas Recirculation                |              | No                  |              |         | Cooled Exhaust Gas Recirculation                 |                       |                           | No                       |                              |                       |  |
| EGR Type                                 |              | --                  |              |         | Exhaust Gas Recirculation Description if 'Other' |                       |                           | --                       |                              |                       |  |
| Closed Loop Air Injection System         |              | --                  |              |         |                                                  |                       |                           |                          |                              |                       |  |
| Air Injection Type                       |              | Not Applicable      |              |         | Air Injection Type if 'Other'                    |                       |                           | --                       |                              |                       |  |
| Mfr Engine Configuration Comments        |              | --                  |              |         |                                                  |                       |                           |                          |                              |                       |  |
| Official Test Numbers                    |              |                     |              |         |                                                  |                       |                           |                          |                              |                       |  |
| Test Group                               |              |                     |              |         |                                                  |                       |                           |                          |                              |                       |  |
| Fuel                                     | FTP          | US06                | SC03         | Cold CO | Highway                                          | EPA City Litmus Value | EPA City Litmus Threshold | EPA Highway Litmus Value | EPA Highway Litmus Threshold | CREE Weighting Factor |  |
| Gasoline                                 | RGMX10079965 | RGMX10079967        | RGMX10079968 | --      | RGMX10079966                                     | --                    | 228.2                     | --                       | 286.1                        | --                    |  |

|            |              |                              |              |
|------------|--------------|------------------------------|--------------|
| Test Group | VGMXD04.3170 | Evaporative/Refueling Family | VGMXR021260A |
|------------|--------------|------------------------------|--------------|

Emission Data Vehicle Information

|                                  |                |                                           |              |
|----------------------------------|----------------|-------------------------------------------|--------------|
| Vehicle ID / Configuration       | 43GCMET996 / 0 | Manufacturer Vehicle Configuration Number | 0            |
| Original Test Group Name         | MGMXD04.3392   | Original Evaporative/Refueling Family     | MGMXR021260A |
| Original Test Vehicle Model Year | 2021           |                                           |              |

Vehicle Model

|                               |           |                                |                        |
|-------------------------------|-----------|--------------------------------|------------------------|
| Represented Test Vehicle Make | CHEVROLET | Represented Test Vehicle Model | G3500 EXPRESS 2WD PASS |
|-------------------------------|-----------|--------------------------------|------------------------|

Leak Family Details

|                        |     |                  |                  |
|------------------------|-----|------------------|------------------|
| Leak Family Identifier | LK1 | Leak Family Name | MGMXR021260A-LK1 |
|------------------------|-----|------------------|------------------|

Drive Sources and Fuel System Details

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

|                                    |                                                                                                 |                                                |                     |
|------------------------------------|-------------------------------------------------------------------------------------------------|------------------------------------------------|---------------------|
| Hybrid Indicator                   | No                                                                                              | Multiple Fuel Combustion                       | --                  |
| Multiple Fuel Storage              | --                                                                                              | Rechargeable Energy Storage System Indicator   | --                  |
| Fuel Cell Indicator                | --                                                                                              | Rechargeable Energy Storage System, if 'Other' | --                  |
| Rechargeable Energy Storage System | --                                                                                              |                                                |                     |
| Off-board charge Capable Indicator | --                                                                                              |                                                |                     |
| Odometer Correction -- Initial     | 0                                                                                               | Odometer Correction Factor                     | 1                   |
| Odometer Correction Sign           | + = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles |                                                |                     |
| Odometer Correction Units          | Miles                                                                                           |                                                |                     |
| Engine Code                        | 2                                                                                               | Rated Horsepower                               | 276                 |
| Displacement (liters)              | 4.3                                                                                             |                                                |                     |
| Air Aspiration Method              | Naturally Aspirated                                                                             | Air Aspiration Method, if 'Other'              | NATURALLY ASPIRATED |
| Number of Air Aspiration Devices   | 0                                                                                               | Air Aspiration Device Configuration            | --                  |
| Charge Air Cooler Type             | N/A                                                                                             | Drive Mode While Testing                       | 2-Wheel Drive, Rear |
| Shift Indicator Light Usage        | Not equipped                                                                                    | Aged Emission Components                       | 150,000 (mi)        |
| Curb Weight (lbs)                  | 6400                                                                                            | Equivalent Test Weight (pounds)                | 8000                |
| GVWR (lbs)                         | 9600                                                                                            | N/V Ratio                                      | 25.3                |
| Axle Ratio                         | 3.42                                                                                            |                                                |                     |
| Transmission Type                  | Automatic                                                                                       | # of Transmission Gears                        | 8                   |
| Transmission Lockup                | Yes                                                                                             | Creeper Gear                                   | No                  |

Dynamometer Coefficients:

| Target Coefficients  |         |             | Set Coefficients |         |             | EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients |      |
|----------------------|---------|-------------|------------------|---------|-------------|-------------------------------------------------------------------------------|------|
| Coefficient Category | A (lbf) | B (lbf/mph) | C (lbf/mph**2)   | A (lbf) | B (lbf/mph) | C (lbf/mph**2)                                                                |      |
| City/Highway/Evap    | 58.44   | 0.3077      | 0.03823          | 36.02   | -0.0982     | 0.03987                                                                       | 22.6 |

Emission Control Device Comments

LV1 Full Body Van

## Certification Summary Information Report

| <b>Test Group</b>                                                                                                                                                                                                                                                                                             | VGMXD04.3170                                                      | <b>Evaporative/Refueling Family</b>                      | VGMXR021260A                                       |                       |                       |                                                          |                                                           |                  |    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------|-----------------------|-----------------------|----------------------------------------------------------|-----------------------------------------------------------|------------------|----|
| <b>Manufacturer Test Vehicle Comments</b>                                                                                                                                                                                                                                                                     | --                                                                |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <b>Test #</b>                                                                                                                                                                                                                                                                                                 | <b>MGMX10064545</b>                                               | <b>Test Procedure</b>                                    | <b>23 - 2-day evap</b>                             |                       |                       |                                                          |                                                           |                  |    |
| <b>Exhaust Test # for this Evap Test</b>                                                                                                                                                                                                                                                                      | MGMX10064540                                                      | <b>Test Fuel Type</b>                                    | 48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.) |                       |                       |                                                          |                                                           |                  |    |
| <b>Test Date</b>                                                                                                                                                                                                                                                                                              | 02/21/2020                                                        | <b>Fuel</b>                                              | Gasoline                                           |                       |                       |                                                          |                                                           |                  |    |
| <b>Fuel Batch ID</b>                                                                                                                                                                                                                                                                                          | --                                                                | <b>Fuel Calibration Number</b>                           | --                                                 |                       |                       |                                                          |                                                           |                  |    |
| <b>Vehicle Class</b>                                                                                                                                                                                                                                                                                          | N/A                                                               | <b>DF Type</b>                                           | Mfr. Determined                                    |                       |                       |                                                          |                                                           |                  |    |
| <b>Verify Test Lab ID</b>                                                                                                                                                                                                                                                                                     | Compliance and Certification                                      |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <b>E10 Evaporative Test Measurement Method</b>                                                                                                                                                                                                                                                                | Actual Total Hydrocarbon Equivalent Measurement (with speciation) |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <b>Test Start Odometer Reading</b>                                                                                                                                                                                                                                                                            | 3926                                                              | <b>Odometer Units</b>                                    | M                                                  |                       |                       |                                                          |                                                           |                  |    |
| <b>4WD Test Dyno</b>                                                                                                                                                                                                                                                                                          | No                                                                | <b>Diesel Adjustment Factor Usage</b>                    | --                                                 |                       |                       |                                                          |                                                           |                  |    |
| <b>State of Charge Delta</b>                                                                                                                                                                                                                                                                                  | No                                                                |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <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>0.3999</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) | 0.3999           | -- |
| Test Result Name                                                                                                                                                                                                                                                                                              | Unrounded Test Result                                             | Verify Calculated FE Equivalent Value (miles per gallon) |                                                    |                       |                       |                                                          |                                                           |                  |    |
| HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)                                                                                                                                                                                                                                                     | 0.3999                                                            | --                                                       |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <b>Manufacturer Test Comments</b>                                                                                                                                                                                                                                                                             | 4K EVF2 TEST                                                      |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <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                                     | 0.3999                | 0                     | 0.4                                                      | 0.6                                                       | Pass             |    |
| CA                                                                                                                                                                                                                                                                                                            | 150,000 miles                                                     | California LEV-III Zero Evap (Option 2)                  | HC-TOTAL-EQUIV                                     | 0.3999                | 0                     | 0.4                                                      | 0.6                                                       | Pass             |    |

## Certification Summary Information Report

| <b>Test Group</b>                                                                                                                                                                                                                                                           | VGMXD04.3170                                                      | <b>Evaporative/Refueling Family</b>                      | VGMXR021260A                                       |                       |                       |                                                          |                                                           |                  |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------|-----------------------|-----------------------|----------------------------------------------------------|-----------------------------------------------------------|------------------|----|
| <b>Test #</b>                                                                                                                                                                                                                                                               | <b>MGMX10064548</b>                                               | <b>Test Procedure</b>                                    | <b>34 - Federal fuel 3-day evap</b>                |                       |                       |                                                          |                                                           |                  |    |
| <b>Exhaust Test # for this Evap Test</b>                                                                                                                                                                                                                                    | MGMX10064540                                                      | <b>Test Fuel Type</b>                                    | 48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.) |                       |                       |                                                          |                                                           |                  |    |
| <b>Test Date</b>                                                                                                                                                                                                                                                            | 04/09/2020                                                        | <b>Fuel</b>                                              | Gasoline                                           |                       |                       |                                                          |                                                           |                  |    |
| <b>Fuel Batch ID</b>                                                                                                                                                                                                                                                        | --                                                                | <b>Fuel Calibration Number</b>                           | --                                                 |                       |                       |                                                          |                                                           |                  |    |
| <b>Vehicle Class</b>                                                                                                                                                                                                                                                        | N/A                                                               | <b>DF Type</b>                                           | Mfr. Determined                                    |                       |                       |                                                          |                                                           |                  |    |
| <b>Verify Test Lab ID</b>                                                                                                                                                                                                                                                   | Compliance and Certification                                      |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <b>E10 Evaporative Test Measurement Method</b>                                                                                                                                                                                                                              | Actual Total Hydrocarbon Equivalent Measurement (with speciation) |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <b>Test Start Odometer Reading</b>                                                                                                                                                                                                                                          | 4163                                                              | <b>Odometer Units</b>                                    | M                                                  |                       |                       |                                                          |                                                           |                  |    |
| <b>4WD Test Dyno</b>                                                                                                                                                                                                                                                        | No                                                                | <b>Diesel Adjustment Factor Usage</b>                    | --                                                 |                       |                       |                                                          |                                                           |                  |    |
| <b>State of Charge Delta</b>                                                                                                                                                                                                                                                | No                                                                |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <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>0.5321</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) | 0.5321           | -- |
| Test Result Name                                                                                                                                                                                                                                                            | Unrounded Test Result                                             | Verify Calculated FE Equivalent Value (miles per gallon) |                                                    |                       |                       |                                                          |                                                           |                  |    |
| HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)                                                                                                                                                                                                                   | 0.5321                                                            | --                                                       |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <b>Manufacturer Test Comments</b>                                                                                                                                                                                                                                           |                                                                   |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| 4K EVF3 TEST                                                                                                                                                                                                                                                                |                                                                   |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <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                                     | 0.5321                | 0                     | 0.532                                                    | 0.6                                                       | Pass             |    |
| CA                                                                                                                                                                                                                                                                          | 150,000 miles                                                     | California LEV-III Zero Evap (Option 2)                  | HC-TOTAL-EQUIV                                     | 0.5321                | 0                     | 0.532                                                    | 0.6                                                       | Pass             |    |

## Certification Summary Information Report

| <b>Test Group</b>                                                                                                                                                                                                                                                          | VGMXD04.3170                                                      | <b>Evaporative/Refueling Family</b>                      | VGMXR021260A                                       |                       |                       |                                                          |                                                           |                  |    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------|-----------------------|-----------------------|----------------------------------------------------------|-----------------------------------------------------------|------------------|----|
| <b>Test #</b>                                                                                                                                                                                                                                                              | <b>MGMX10064546</b>                                               | <b>Test Procedure</b>                                    | <b>24 - Federal fuel refueling test (ORVR)</b>     |                       |                       |                                                          |                                                           |                  |    |
| <b>Exhaust Test # for this Evap Test</b>                                                                                                                                                                                                                                   | MGMX10064540                                                      | <b>Test Fuel Type</b>                                    | 48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.) |                       |                       |                                                          |                                                           |                  |    |
| <b>Test Date</b>                                                                                                                                                                                                                                                           | 02/28/2020                                                        | <b>Fuel</b>                                              | Gasoline                                           |                       |                       |                                                          |                                                           |                  |    |
| <b>Fuel Batch ID</b>                                                                                                                                                                                                                                                       | --                                                                | <b>Fuel Calibration Number</b>                           | --                                                 |                       |                       |                                                          |                                                           |                  |    |
| <b>Vehicle Class</b>                                                                                                                                                                                                                                                       | N/A                                                               | <b>DF Type</b>                                           | Mfr. Determined                                    |                       |                       |                                                          |                                                           |                  |    |
| <b>Verify Test Lab ID</b>                                                                                                                                                                                                                                                  | Compliance and Certification                                      |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <b>E10 Evaporative Test Measurement Method</b>                                                                                                                                                                                                                             | Actual Total Hydrocarbon Equivalent Measurement (with speciation) |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <b>Test Start Odometer Reading</b>                                                                                                                                                                                                                                         | 3975                                                              | <b>Odometer Units</b>                                    | M                                                  |                       |                       |                                                          |                                                           |                  |    |
| <b>4WD Test Dyno</b>                                                                                                                                                                                                                                                       | No                                                                | <b>Diesel Adjustment Factor Usage</b>                    | --                                                 |                       |                       |                                                          |                                                           |                  |    |
| <b>State of Charge Delta</b>                                                                                                                                                                                                                                               | No                                                                |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <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>0.053</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) | 0.053            | -- |
| Test Result Name                                                                                                                                                                                                                                                           | Unrounded Test Result                                             | Verify Calculated FE Equivalent Value (miles per gallon) |                                                    |                       |                       |                                                          |                                                           |                  |    |
| HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)                                                                                                                                                                                                                  | 0.053                                                             | --                                                       |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <b>Manufacturer Test Comments</b>                                                                                                                                                                                                                                          |                                                                   |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| 4K ORVR TEST                                                                                                                                                                                                                                                               |                                                                   |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <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                                     | 0.053                 | 0                     | 0.05                                                     | 0.2                                                       | Pass             |    |
| CA                                                                                                                                                                                                                                                                         | 150,000 miles                                                     | California LEV-III Zero Evap (Option 2)                  | HC-TOTAL-EQUIV                                     | 0.053                 | 0                     | 0.05                                                     | 0.2                                                       | Pass             |    |

## Certification Summary Information Report

| <b>Test Group</b>                                                                                                                                                                                                                                                            | VGMXD04.3170                                                      | <b>Evaporative/Refueling Family</b>                      | VGMXR021260A                                       |                       |                       |                                                          |                                                           |                  |    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------|-----------------------|-----------------------|----------------------------------------------------------|-----------------------------------------------------------|------------------|----|
| <b>Test #</b>                                                                                                                                                                                                                                                                | <b>MGMX10064547</b>                                               | <b>Test Procedure</b>                                    | <b>32 - Federal Fuel Running Loss</b>              |                       |                       |                                                          |                                                           |                  |    |
| <b>Exhaust Test # for this Evap Test</b>                                                                                                                                                                                                                                     | MGMX10064540                                                      | <b>Test Fuel Type</b>                                    | 48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.) |                       |                       |                                                          |                                                           |                  |    |
| <b>Test Date</b>                                                                                                                                                                                                                                                             | 04/09/2020                                                        | <b>Fuel</b>                                              | Gasoline                                           |                       |                       |                                                          |                                                           |                  |    |
| <b>Fuel Batch ID</b>                                                                                                                                                                                                                                                         | --                                                                | <b>Fuel Calibration Number</b>                           | --                                                 |                       |                       |                                                          |                                                           |                  |    |
| <b>Vehicle Class</b>                                                                                                                                                                                                                                                         | N/A                                                               | <b>DF Type</b>                                           | Mfr. Determined                                    |                       |                       |                                                          |                                                           |                  |    |
| <b>Verify Test Lab ID</b>                                                                                                                                                                                                                                                    | Compliance and Certification                                      |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <b>E10 Evaporative Test Measurement Method</b>                                                                                                                                                                                                                               | Actual Total Hydrocarbon Equivalent Measurement (with speciation) |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <b>Test Start Odometer Reading</b>                                                                                                                                                                                                                                           | 4163                                                              | <b>Odometer Units</b>                                    | M                                                  |                       |                       |                                                          |                                                           |                  |    |
| <b>4WD Test Dyno</b>                                                                                                                                                                                                                                                         | No                                                                | <b>Diesel Adjustment Factor Usage</b>                    | --                                                 |                       |                       |                                                          |                                                           |                  |    |
| <b>State of Charge Delta</b>                                                                                                                                                                                                                                                 | No                                                                |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <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>0.00021</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) | 0.00021          | -- |
| Test Result Name                                                                                                                                                                                                                                                             | Unrounded Test Result                                             | Verify Calculated FE Equivalent Value (miles per gallon) |                                                    |                       |                       |                                                          |                                                           |                  |    |
| HC-TOTAL-EQUIV (Total Hydrocarbon equivalent - Evap only)                                                                                                                                                                                                                    | 0.00021                                                           | --                                                       |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <b>Manufacturer Test Comments</b>                                                                                                                                                                                                                                            |                                                                   |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| 4K EVFR TEST                                                                                                                                                                                                                                                                 |                                                                   |                                                          |                                                    |                       |                       |                                                          |                                                           |                  |    |
| <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                     | 0                     | 0                                                        | 0.05                                                      | Pass             |    |
| CA                                                                                                                                                                                                                                                                           | 150,000 miles                                                     | California LEV-III Zero Evap (Option 2)                  | HC-TOTAL-EQUIV                                     | 0                     | 0                     | 0                                                        | 0.05                                                      | Pass             |    |

## Certification Summary Information Report

| <b>Test Group</b>                                                                                                                                                                                                                                      | VGMXD04.3170                                                      | <b>Evaporative/Refueling Family</b>                      | VGMXR021260A                                       |                       |                       |                                                          |                                     |                  |    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------|-----------------------|-----------------------|----------------------------------------------------------|-------------------------------------|------------------|----|
| <b>Test #</b>                                                                                                                                                                                                                                          | <b>MGMX10064746</b>                                               | <b>Test Procedure</b>                                    | <b>65 - Evap Canister Bleed Test</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>                                                                                                                                                                                                                                       | 05/04/2020                                                        | <b>Fuel</b>                                              | Gasoline                                           |                       |                       |                                                          |                                     |                  |    |
| <b>Fuel Batch ID</b>                                                                                                                                                                                                                                   | --                                                                | <b>Fuel Calibration Number</b>                           | --                                                 |                       |                       |                                                          |                                     |                  |    |
| <b>Vehicle Class</b>                                                                                                                                                                                                                                   | N/A                                                               | <b>DF Type</b>                                           | Mfr. Determined                                    |                       |                       |                                                          |                                     |                  |    |
| <b>Verify Test Lab ID</b>                                                                                                                                                                                                                              | Compliance and Certification                                      |                                                          |                                                    |                       |                       |                                                          |                                     |                  |    |
| <b>E10 Evaporative Test Measurement Method</b>                                                                                                                                                                                                         | Actual Total Hydrocarbon Equivalent Measurement (with speciation) |                                                          |                                                    |                       |                       |                                                          |                                     |                  |    |
| <b>Test Start Odometer Reading</b>                                                                                                                                                                                                                     | 4180                                                              | <b>Odometer Units</b>                                    | M                                                  |                       |                       |                                                          |                                     |                  |    |
| <b>4WD Test Dyno</b>                                                                                                                                                                                                                                   | No                                                                | <b>Diesel Adjustment Factor Usage</b>                    | --                                                 |                       |                       |                                                          |                                     |                  |    |
| <b>State of Charge Delta</b>                                                                                                                                                                                                                           | No                                                                |                                                          |                                                    |                       |                       |                                                          |                                     |                  |    |
| <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><b>HC-TOTAL (Total Hydrocarbon)</b></td> <td>0.01081</td> <td>--</td> </tr> </table> |                                                                   |                                                          |                                                    | Test Result Name      | Unrounded Test Result | Verify Calculated FE Equivalent Value (miles per gallon) | <b>HC-TOTAL (Total Hydrocarbon)</b> | 0.01081          | -- |
| Test Result Name                                                                                                                                                                                                                                       | Unrounded Test Result                                             | Verify Calculated FE Equivalent Value (miles per gallon) |                                                    |                       |                       |                                                          |                                     |                  |    |
| <b>HC-TOTAL (Total Hydrocarbon)</b>                                                                                                                                                                                                                    | 0.01081                                                           | --                                                       |                                                    |                       |                       |                                                          |                                     |                  |    |
| <b>Manufacturer Test Comments</b>                                                                                                                                                                                                                      |                                                                   |                                                          |                                                    |                       |                       |                                                          |                                     |                  |    |
| 4K CBLD TEST                                                                                                                                                                                                                                           |                                                                   |                                                          |                                                    |                       |                       |                                                          |                                     |                  |    |
| <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                                           | 0.0108                | 0                     | 0.011                                                    | 0.03                                | Pass             |    |
| CA                                                                                                                                                                                                                                                     | 150,000 miles                                                     | California LEV-III Zero Evap (Option 2)                  | HC-TOTAL                                           | 0.0108                | 0                     | 0.011                                                    | 0.03                                | Pass             |    |

## Certification Summary Information Report

| <b>Test Group</b>                            | VGMXD04.3170                                                                                                                                                                                              | <b>Evaporative/Refueling Family</b>                   | VGMXR021260A                 |      |   |                   |          |  |  |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------|------|---|-------------------|----------|--|--|
| <b>Emission Data Vehicle Information</b>     |                                                                                                                                                                                                           |                                                       |                              |      |   |                   |          |  |  |
| <b>Vehicle ID / Configuration</b>            | 43GGRVT785 / 0                                                                                                                                                                                            | <b>Manufacturer Vehicle Configuration Number</b>      | 1                            |      |   |                   |          |  |  |
| <b>Original Test Group Name</b>              | RGMXD04.3170                                                                                                                                                                                              | <b>Original Evaporative/Refueling Family</b>          | RGMXF02176BB                 |      |   |                   |          |  |  |
| <b>Original Test Vehicle Model Year</b>      | 2024                                                                                                                                                                                                      |                                                       |                              |      |   |                   |          |  |  |
| <b>Vehicle Model</b>                         |                                                                                                                                                                                                           |                                                       |                              |      |   |                   |          |  |  |
| <b>Represented Test Vehicle Make</b>         | CHEVROLET                                                                                                                                                                                                 | <b>Represented Test Vehicle Model</b>                 | G3500 EXPRESS 2WD CUTAWAY CH |      |   |                   |          |  |  |
| <b>Leak Family Details</b>                   |                                                                                                                                                                                                           |                                                       |                              |      |   |                   |          |  |  |
| <b>Leak Family Identifier</b>                | LK1                                                                                                                                                                                                       | <b>Leak Family Name</b>                               | RGMXF02176BB-LK1             |      |   |                   |          |  |  |
| <b>Drive Sources and Fuel System Details</b> |                                                                                                                                                                                                           |                                                       |                              |      |   |                   |          |  |  |
|                                              | <table border="1"> <thead> <tr> <th>Drive Source and Fuel#</th><th>Drive Source</th><th>Fuel</th></tr> </thead> <tbody> <tr> <td>1</td><td>Combustion Engine</td><td>Gasoline</td></tr> </tbody> </table> | Drive Source and Fuel#                                | Drive Source                 | Fuel | 1 | Combustion Engine | Gasoline |  |  |
| Drive Source and Fuel#                       | Drive Source                                                                                                                                                                                              | Fuel                                                  |                              |      |   |                   |          |  |  |
| 1                                            | Combustion Engine                                                                                                                                                                                         | Gasoline                                              |                              |      |   |                   |          |  |  |
| <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                            |      |   |                   |          |  |  |
| <b>Odometer Correction Sign</b>              | + = System Miles is equal to (Test odometer reading * Correction factor) + Initial system miles                                                                                                           |                                                       |                              |      |   |                   |          |  |  |
| <b>Odometer Correction Units</b>             | Miles                                                                                                                                                                                                     |                                                       |                              |      |   |                   |          |  |  |
| <b>Engine Code</b>                           | 1                                                                                                                                                                                                         | <b>Rated Horsepower</b>                               | 276                          |      |   |                   |          |  |  |
| <b>Displacement (liters)</b>                 | 4.3                                                                                                                                                                                                       |                                                       |                              |      |   |                   |          |  |  |
| <b>Air Aspiration Method</b>                 | Naturally Aspirated                                                                                                                                                                                       | <b>Air Aspiration Method, if 'Other'</b>              |                              |      |   |                   |          |  |  |
| <b>Number of Air Aspiration Devices</b>      | 0                                                                                                                                                                                                         | <b>Air Aspiration Device Configuration</b>            | --                           |      |   |                   |          |  |  |
| <b>Charge Air Cooler Type</b>                | N/A                                                                                                                                                                                                       | <b>Drive Mode While Testing</b>                       | 2-Wheel Drive, Rear          |      |   |                   |          |  |  |
| <b>Shift Indicator Light Usage</b>           | Not equipped                                                                                                                                                                                              | <b>Aged Emission Components</b>                       | 150,000 (mi)                 |      |   |                   |          |  |  |
| <b>Curb Weight (lbs)</b>                     | 7670                                                                                                                                                                                                      | <b>Equivalent Test Weight (pounds)</b>                | 9000                         |      |   |                   |          |  |  |
| <b>GVWR (lbs)</b>                            | 9900                                                                                                                                                                                                      | <b>N/V Ratio</b>                                      | 25.3                         |      |   |                   |          |  |  |
| <b>Axle Ratio</b>                            | 3.42                                                                                                                                                                                                      |                                                       |                              |      |   |                   |          |  |  |
| <b>Transmission Type</b>                     | Automatic                                                                                                                                                                                                 | <b># of Transmission Gears</b>                        | 8                            |      |   |                   |          |  |  |
| <b>Transmission Lockup</b>                   | Yes                                                                                                                                                                                                       | <b>Creep Gear</b>                                     | No                           |      |   |                   |          |  |  |

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## Certification Summary Information Report

| Test Group                                     | VGMXD04.3170                                                                                | Evaporative/Refueling Family          | VGMXR021260A                                       |
|------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------|----------------------------------------------------|
| <b>Test #</b>                                  | <b>RGMX10079965</b>                                                                         | <b>Test Procedure</b>                 | <b>31 - Federal fuel 3-day exhaust</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>                               | 03/15/2023                                                                                  | <b>Fuel</b>                           | Gasoline                                           |
| <b>Fuel Batch ID</b>                           | 000329                                                                                      | <b>Fuel Calibration Number</b>        | 9322                                               |
| <b>Vehicle Class</b>                           | HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000) | <b>DF Type</b>                        | Mfr. Determined                                    |
| <b>Verify Test Lab ID</b>                      | Compliance and Certification                                                                |                                       |                                                    |
| <b>E10 Evaporative Test Measurement Method</b> | --                                                                                          |                                       |                                                    |
| <b>Test Start Odometer Reading</b>             | 3971                                                                                        | <b>Odometer Units</b>                 | M                                                  |
| <b>4WD Test Dyno</b>                           | No                                                                                          | <b>Diesel Adjustment Factor Usage</b> | --                                                 |
| <b>State of Charge Delta</b>                   | No                                                                                          |                                       |                                                    |
| <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                       | VGMXD04.3170                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Evaporative/Refueling Family    | VGMXR021260A                                             |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------------------------------------------|----------------------------------------------------------|----------------------------------|---------|-----|-------------------------------|------|------|----------------------------------|---------|----|-------------------------------|------|------|----------------------------------|---------|----|-------------------------------|------|------|-------------------------|----------|----|----------------------|----------|----|-------------------------------------------------------|---------|----|-------------------------------------------------------------|---------|----|----------------------------------------------------|---------|----|--------------------------------------------|-----------|----|-------------------------------------------------|----------|----|------------------------------------|------|------|----------------------|----------|----|---------------------|-----------|----|---------------------------------|----------|----|----------------------------------|----------|----|-------------------------|----------|----|------------------------------|----------|----|--|--|
|                                  | <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>715.06</td><td>--</td></tr><tr><td>FE BAG 1 (Bag 1 Fuel Economy)</td><td>12.1</td><td>12.1</td></tr><tr><td>CO2 BAG 2 (Bag 2 Carbon Dioxide)</td><td>682.303</td><td>--</td></tr><tr><td>FE BAG 2 (Bag 2 Fuel Economy)</td><td>12.8</td><td>12.8</td></tr><tr><td>CO2 BAG 3 (Bag 3 Carbon Dioxide)</td><td>660.837</td><td>--</td></tr><tr><td>FE BAG 3 (Bag 3 Fuel Economy)</td><td>13.2</td><td>13.2</td></tr><tr><td>METHANE (CH4 - Methane)</td><td>0.022555</td><td>--</td></tr><tr><td>CO (Carbon Monoxide)</td><td>0.727858</td><td>--</td></tr><tr><td>METHANE-COMB (Combined CH4 for HD 2b/3 vehicles only)</td><td>0.01504</td><td>--</td></tr><tr><td>N2O-COMB (Combined Nitrous Oxide for HD 2b/3 vehicles only)</td><td>0.00481</td><td>--</td></tr><tr><td>DT-ASCR (Drive Trace Absolute Speed Change Rating)</td><td>0.05127</td><td>--</td></tr><tr><td>DT-EER (Drive Trace Energy Economy Rating)</td><td>-0.281878</td><td>--</td></tr><tr><td>DT-IWRR (Drive Trace Inertia Work Ratio Rating)</td><td>0.249307</td><td>--</td></tr><tr><td>MFR FE (Manufacturer Fuel Economy)</td><td>12.7</td><td>12.7</td></tr><tr><td>NOX (Nitrogen Oxide)</td><td>0.036173</td><td>--</td></tr><tr><td>N2O (Nitrous Oxide)</td><td>0.0076051</td><td>--</td></tr><tr><td>HC-NM (Non-methane Hydrocarbon)</td><td>0.051192</td><td>--</td></tr><tr><td>NMOG (Non-methane organic gases)</td><td>0.056297</td><td>--</td></tr><tr><td>PM (Particulate Matter)</td><td>0.003383</td><td>--</td></tr><tr><td>HC-TOTAL (Total Hydrocarbon)</td><td>0.072313</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) | 715.06  | --  | FE BAG 1 (Bag 1 Fuel Economy) | 12.1 | 12.1 | CO2 BAG 2 (Bag 2 Carbon Dioxide) | 682.303 | -- | FE BAG 2 (Bag 2 Fuel Economy) | 12.8 | 12.8 | CO2 BAG 3 (Bag 3 Carbon Dioxide) | 660.837 | -- | FE BAG 3 (Bag 3 Fuel Economy) | 13.2 | 13.2 | METHANE (CH4 - Methane) | 0.022555 | -- | CO (Carbon Monoxide) | 0.727858 | -- | METHANE-COMB (Combined CH4 for HD 2b/3 vehicles only) | 0.01504 | -- | N2O-COMB (Combined Nitrous Oxide for HD 2b/3 vehicles only) | 0.00481 | -- | DT-ASCR (Drive Trace Absolute Speed Change Rating) | 0.05127 | -- | DT-EER (Drive Trace Energy Economy Rating) | -0.281878 | -- | DT-IWRR (Drive Trace Inertia Work Ratio Rating) | 0.249307 | -- | MFR FE (Manufacturer Fuel Economy) | 12.7 | 12.7 | NOX (Nitrogen Oxide) | 0.036173 | -- | N2O (Nitrous Oxide) | 0.0076051 | -- | HC-NM (Non-methane Hydrocarbon) | 0.051192 | -- | NMOG (Non-methane organic gases) | 0.056297 | -- | PM (Particulate Matter) | 0.003383 | -- | HC-TOTAL (Total Hydrocarbon) | 0.072313 | -- |  |  |
|                                  | Test Result Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Unrounded Test Result           | Verify Calculated FE Equivalent Value (miles per gallon) |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
|                                  | CO2 BAG 1 (Bag 1 Carbon Dioxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 715.06                          | --                                                       |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
|                                  | FE BAG 1 (Bag 1 Fuel Economy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 12.1                            | 12.1                                                     |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
|                                  | CO2 BAG 2 (Bag 2 Carbon Dioxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 682.303                         | --                                                       |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
|                                  | FE BAG 2 (Bag 2 Fuel Economy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 12.8                            | 12.8                                                     |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
|                                  | CO2 BAG 3 (Bag 3 Carbon Dioxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 660.837                         | --                                                       |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
|                                  | FE BAG 3 (Bag 3 Fuel Economy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 13.2                            | 13.2                                                     |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
|                                  | METHANE (CH4 - Methane)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.022555                        | --                                                       |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
|                                  | CO (Carbon Monoxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.727858                        | --                                                       |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
|                                  | METHANE-COMB (Combined CH4 for HD 2b/3 vehicles only)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.01504                         | --                                                       |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
|                                  | N2O-COMB (Combined Nitrous Oxide for HD 2b/3 vehicles only)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.00481                         | --                                                       |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
|                                  | DT-ASCR (Drive Trace Absolute Speed Change Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0.05127                         | --                                                       |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
|                                  | DT-EER (Drive Trace Energy Economy Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | -0.281878                       | --                                                       |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
|                                  | DT-IWRR (Drive Trace Inertia Work Ratio Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.249307                        | --                                                       |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
|                                  | MFR FE (Manufacturer Fuel Economy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 12.7                            | 12.7                                                     |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
|                                  | NOX (Nitrogen Oxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.036173                        | --                                                       |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
|                                  | N2O (Nitrous Oxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.0076051                       | --                                                       |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
|                                  | HC-NM (Non-methane Hydrocarbon)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.051192                        | --                                                       |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
|                                  | NMOG (Non-methane organic gases)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.056297                        | --                                                       |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
|                                  | PM (Particulate Matter)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.003383                        | --                                                       |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
| HC-TOTAL (Total Hydrocarbon)     | 0.072313                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | --                              |                                                          |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
|                                  | <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>684</td><td>999</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Test Result Name                | Unrounded Test Result                                    | Verify Calculated CREE/OPT-CREE                          | Carbon-Related Exhaust Emissions | 684     | 999 |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
| Test Result Name                 | Unrounded Test Result                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Verify Calculated CREE/OPT-CREE |                                                          |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
| Carbon-Related Exhaust Emissions | 684                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 999                             |                                                          |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
|                                  | <table><tr><th>Test Result Name</th><th>Unrounded Test Result</th><th>Verify Calculated CO2</th></tr><tr><td>Carbon dioxide</td><td>683.202</td><td>--</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Test Result Name                | Unrounded Test Result                                    | Verify Calculated CO2                                    | Carbon dioxide                   | 683.202 | --  |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
| Test Result Name                 | Unrounded Test Result                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Verify Calculated CO2           |                                                          |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
| Carbon dioxide                   | 683.202                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | --                              |                                                          |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |
| Manufacturer Test Comments       | 150K EMIS TEST                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                 |                                                          |                                                          |                                  |         |     |                               |      |      |                                  |         |    |                               |      |      |                                  |         |    |                               |      |      |                         |          |    |                      |          |    |                                                       |         |    |                                                             |         |    |                                                    |         |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |           |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |  |  |

## Certification Summary Information Report

| Test Group           |               | VGMXD04.3170                       |               |                |     | Evaporative/Refueling Family |                          |        |         | VGMXR021260A        |          |           |
|----------------------|---------------|------------------------------------|---------------|----------------|-----|------------------------------|--------------------------|--------|---------|---------------------|----------|-----------|
| Certification Region | Useful Life   | Standard Level                     | Emission Name | Rounded Result | RAF | NMOG/NM HC Ratio             | Diesel Adjustment Factor | Add DF | Mult DF | Certification Level | Standard | Pass/Fail |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | CO            | 0.73           | 1   | --                           | --                       | --     | --      | 0.7                 | 4.2      | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | CO-COMP       | 1.36           | 1   | --                           | --                       | --     | --      | 1.4                 | 12.0     | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | CO2           | 999            | 1   | --                           | --                       | 0      | --      | 999                 | --       | --        |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | METHANE       | 0.0226         | 1   | --                           | --                       | --     | --      | 0.023               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | N2O           | 0.0076         | 1   | --                           | --                       | --     | --      | 0.008               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | NMOG          | 0.0563         | 1   | --                           | --                       | --     | --      | 0.056               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | NMOG+NOX      | 0.0925         | 1   | --                           | --                       | --     | --      | 0.092               | 0.170    | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | NMOG+NOX-COMP | 0.0705         | 1   | --                           | --                       | --     | --      | 0.07                | 0.450    | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | NOX           | 0.0362         | 1   | --                           | --                       | --     | --      | 0.036               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | PM            | 0.0034         | 1   | --                           | --                       | --     | --      | 0.003               | 0.008    | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | PM-COMP       | 0.0022         | 1   | --                           | --                       | --     | --      | 0.002               | 0.010    | Pass      |
| CA                   | 150,000 miles | California LEV-III SULEV170        | CO            | 0.73           | 1   | --                           | --                       | --     | --      | 0.7                 | 4.2      | Pass      |
| CA                   | 150,000 miles | California LEV-III SULEV170        | CO-COMP       | 1.36           | 1   | --                           | --                       | --     | --      | 1.4                 | 12.0     | Pass      |
| CA                   | 150,000 miles | California LEV-III SULEV170        | NMOG          | 0.0563         | 1   | --                           | --                       | --     | --      | 0.056               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-III SULEV170        | NMOG+NOX      | 0.0925         | 1   | --                           | --                       | --     | --      | 0.092               | 0.170    | Pass      |
| CA                   | 150,000 miles | California LEV-III SULEV170        | NMOG+NOX-COMP | 0.0705         | 1   | --                           | --                       | --     | --      | 0.07                | 0.450    | Pass      |
| CA                   | 150,000 miles | California LEV-III SULEV170        | NOX           | 0.0362         | 1   | --                           | --                       | --     | --      | 0.036               | 99.999   | Pass      |

Certification Summary Information Report

| Test Group           |               | VGMXD04.3170                |               |                |     | Evaporative/Refueling Family |                          |        |         | VGMXR021260A        |          |           |
|----------------------|---------------|-----------------------------|---------------|----------------|-----|------------------------------|--------------------------|--------|---------|---------------------|----------|-----------|
| Certification Region | Useful Life   | Standard Level              | Emission Name | Rounded Result | RAF | NMOG/NM HC Ratio             | Diesel Adjustment Factor | Add DF | Mult DF | Certification Level | Standard | Pass/Fail |
| CA                   | 150,000 miles | California LEV-III SULEV170 | PM            | 0.0034         | 1   | --                           | --                       | --     | --      | 0.003               | 0.008    | Pass      |
| CA                   | 150,000 miles | California LEV-III SULEV170 | PM-COMP       | 0.0022         | 1   | --                           | --                       | --     | --      | 0.002               | 0.010    | Pass      |

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

## Certification Summary Information Report

|                                                |                                                                                             |                                       |                                        |
|------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------|----------------------------------------|
| <b>Test Group</b>                              | VGMXD04.3170                                                                                | <b>Evaporative/Refueling Family</b>   | VGMXR021260A                           |
| <b>Test #</b>                                  | <b>RGMX10079969</b>                                                                         | <b>Test Procedure</b>                 | <b>31 - Federal fuel 3-day exhaust</b> |
| <b>Exhaust Test # for this Evap Test</b>       | --                                                                                          | <b>Test Fuel Type</b>                 | 61 - Tier 2 Cert Gasoline              |
| <b>Test Date</b>                               | 04/02/2023                                                                                  | <b>Fuel</b>                           | Gasoline                               |
| <b>Fuel Batch ID</b>                           | 000307                                                                                      | <b>Fuel Calibration Number</b>        | 9320                                   |
| <b>Vehicle Class</b>                           | HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000) | <b>DF Type</b>                        | Mfr. Determined                        |
| <b>Verify Test Lab ID</b>                      | Compliance and Certification                                                                |                                       |                                        |
| <b>E10 Evaporative Test Measurement Method</b> | --                                                                                          |                                       |                                        |
| <b>Test Start Odometer Reading</b>             | 4108                                                                                        | <b>Odometer Units</b>                 | M                                      |
| <b>4WD Test Dyno</b>                           | No                                                                                          | <b>Diesel Adjustment Factor Usage</b> | --                                     |
| <b>State of Charge Delta</b>                   | No                                                                                          |                                       |                                        |
| <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) |
|-------------------------------------------------------------|-----------------------|----------------------------------------------------------|
| CO2 BAG 1 (Bag 1 Carbon Dioxide)                            | 724.114               | --                                                       |
| FE BAG 1 (Bag 1 Fuel Economy)                               | 12.2                  | 12.2                                                     |
| CO2 BAG 2 (Bag 2 Carbon Dioxide)                            | 687.601               | --                                                       |
| FE BAG 2 (Bag 2 Fuel Economy)                               | 13                    | 13                                                       |
| CO2 BAG 3 (Bag 3 Carbon Dioxide)                            | 671.474               | --                                                       |
| FE BAG 3 (Bag 3 Fuel Economy)                               | 13.3                  | 13.3                                                     |
| METHANE (CH4 - Methane)                                     | 0.026236              | --                                                       |
| CO (Carbon Monoxide)                                        | 0.708562              | --                                                       |
| METHANE-COMB (Combined CH4 for HD 2b/3 vehicles only)       | 0.018325              | --                                                       |
| N2O-COMB (Combined Nitrous Oxide for HD 2b/3 vehicles only) | 0.00557               | --                                                       |
| DT-ASCR (Drive Trace Absolute Speed Change Rating)          | 0.111886              | --                                                       |
| DT-EER (Drive Trace Energy Economy Rating)                  | -0.170351             | --                                                       |
| DT-IWRR (Drive Trace Inertia Work Ratio Rating)             | -0.015802             | --                                                       |
| MFR FE (Manufacturer Fuel Economy)                          | 12.9                  | 12.9                                                     |
| NOX (Nitrogen Oxide)                                        | 0.026834              | --                                                       |
| N2O (Nitrous Oxide)                                         | 0.005252              | --                                                       |
| HC-NM (Non-methane Hydrocarbon)                             | 0.046451              | --                                                       |
| NMOG (Non-methane organic gases)                            | 0.047854              | --                                                       |
| HC-TOTAL (Total Hydrocarbon)                                | 0.071684              | --                                                       |

## Certification Summary Information Report

| Test Group                                                                                                   |               | VGMXD04.3170                       |               |                       |     | Evaporative/Refueling Family    |                          |        |         | VGMXR021260A        |          |           |
|--------------------------------------------------------------------------------------------------------------|---------------|------------------------------------|---------------|-----------------------|-----|---------------------------------|--------------------------|--------|---------|---------------------|----------|-----------|
|                                                                                                              |               | Test Result Name                   |               | Unrounded Test Result |     | Verify Calculated CREE/OPT-CREE |                          |        |         |                     |          |           |
|                                                                                                              |               | Carbon-Related Exhaust Emissions   |               | 692                   |     | 692                             |                          |        |         |                     |          |           |
|                                                                                                              |               | Test Result Name                   |               | Unrounded Test Result |     | Verify Calculated CO2           |                          |        |         |                     |          |           |
|                                                                                                              |               | Carbon dioxide                     |               | 690.732               |     | --                              |                          |        |         |                     |          |           |
| Manufacturer Test Comments                                                                                   |               | 150K EMIS TEST                     |               |                       |     |                                 |                          |        |         |                     |          |           |
| Certification Region                                                                                         | Useful Life   | Standard Level                     | Emission Name | Rounded Result        | RAF | NMOG/NM HC Ratio                | Diesel Adjustment Factor | Add DF | Mult DF | Certification Level | Standard | Pass/Fail |
| Fed                                                                                                          | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | CO            | 0.71                  | 1   | --                              | --                       | --     | --      | 0.7                 | 4.2      | Pass      |
| Fed                                                                                                          | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | CO2           | 692                   | 1   | --                              | --                       | 0      | --      | 692                 | --       | --        |
| Fed                                                                                                          | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | METHANE       | 0.0262                | 1   | --                              | --                       | --     | --      | 0.026               | 99.999   | Pass      |
| Fed                                                                                                          | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | N2O           | 0.0053                | 1   | --                              | --                       | --     | --      | 0.005               | 99.999   | Pass      |
| Fed                                                                                                          | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | NMOG          | 0.0479                | 1   | --                              | --                       | --     | --      | 0.048               | 99.999   | Pass      |
| Fed                                                                                                          | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | NMOG+NOX      | 0.0747                | 1   | --                              | --                       | --     | --      | 0.075               | 0.170    | Pass      |
| Fed                                                                                                          | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | NOX           | 0.0268                | 1   | --                              | --                       | --     | --      | 0.027               | 99.999   | Pass      |
| CA                                                                                                           | 150,000 miles | California LEV-III SULEV170        | CO            | 0.71                  | 1   | --                              | --                       | --     | --      | 0.7                 | 4.2      | Pass      |
| CA                                                                                                           | 150,000 miles | California LEV-III SULEV170        | NMOG          | 0.0479                | 1   | --                              | --                       | --     | --      | 0.048               | 99.999   | Pass      |
| CA                                                                                                           | 150,000 miles | California LEV-III SULEV170        | NMOG+NOX      | 0.0747                | 1   | --                              | --                       | --     | --      | 0.075               | 0.170    | Pass      |
| CA                                                                                                           | 150,000 miles | California LEV-III SULEV170        | NOX           | 0.0268                | 1   | --                              | --                       | --     | --      | 0.027               | 99.999   | Pass      |
| NOTE: For Non-charge depleting tests, the Rounded Result for CO2 Emission name is a Verify-calculated value. |               |                                    |               |                       |     |                                 |                          |        |         |                     |          |           |

## Certification Summary Information Report

| <b>Test Group</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | VGMXD04.3170                                                                                | <b>Evaporative/Refueling Family</b>                      | VGMXR021260A                                       |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------|------------------|-----------------------|----------------------------------------------------------|----------------------------------|----------|-----|----------------------|---------|----|----------------------------------------------------|----------|----|--------------------------------------------|-----------|----|-------------------------------------------------|---------|----|------------------------------------|------|------|----------------------|----------|----|---------------------|----------|----|---------------------------------|----------|----|----------------------------------|----------|----|------------------------------|----------|----|
| <b>Test #</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>RGMX10079966</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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 03/15/2023                                                                                  | <b>Fuel</b>                                              | Gasoline                                           |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| <b>Fuel Batch ID</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 000329                                                                                      | <b>Fuel Calibration Number</b>                           | 9322                                               |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| <b>Vehicle Class</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000) | <b>DF Type</b>                                           | Mfr. Determined                                    |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| <b>Verify Test Lab ID</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Compliance and Certification                                                                |                                                          |                                                    |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| <b>E10 Evaporative Test Measurement Method</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | --                                                                                          |                                                          |                                                    |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| <b>Test Start Odometer Reading</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3982                                                                                        | <b>Odometer Units</b>                                    | M                                                  |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| <b>4WD Test Dyno</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No                                                                                          | <b>Diesel Adjustment Factor Usage</b>                    | --                                                 |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| <b>State of Charge Delta</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No                                                                                          |                                                          |                                                    |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| <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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                             |                                                          |                                                    |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
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| Test Result Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Unrounded Test Result                                                                       | Verify Calculated FE Equivalent Value (miles per gallon) |                                                    |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| METHANE (CH4 - Methane)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.005775                                                                                    | --                                                       |                                                    |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| CO (Carbon Monoxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.08746                                                                                     | --                                                       |                                                    |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| DT-ASCR (Drive Trace Absolute Speed Change Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0.929032                                                                                    | --                                                       |                                                    |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| DT-EER (Drive Trace Energy Economy Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | -0.141676                                                                                   | --                                                       |                                                    |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| DT-IWRR (Drive Trace Inertia Work Ratio Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1.04444                                                                                     | --                                                       |                                                    |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| MFR FE (Manufacturer Fuel Economy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 16.9                                                                                        | 16.9                                                     |                                                    |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| NOX (Nitrogen Oxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.004581                                                                                    | --                                                       |                                                    |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| N2O (Nitrous Oxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.001387                                                                                    | --                                                       |                                                    |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| HC-NM (Non-methane Hydrocarbon)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.000497                                                                                    | --                                                       |                                                    |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| NMOG (Non-methane organic gases)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0.000511                                                                                    | --                                                       |                                                    |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| HC-TOTAL (Total Hydrocarbon)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.006051                                                                                    | --                                                       |                                                    |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
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| Test Result Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Unrounded Test Result                                                                       | Verify Calculated CREE/OPT-CREE                          |                                                    |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| Carbon-Related Exhaust Emissions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 516                                                                                         | 999                                                      |                                                    |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
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| Test Result Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Unrounded Test Result                                                                       | Verify Calculated CO2                                    |                                                    |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| Carbon dioxide                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 515.801                                                                                     | --                                                       |                                                    |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| <b>Manufacturer Test Comments</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 150K HWFE TEST                                                                              |                                                          |                                                    |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |         |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |

## Certification Summary Information Report

| Test Group           |               | VGMXD04.3170                       |               |                |     | Evaporative/Refueling Family |                          |        |         | VGMXR021260A        |          |           |
|----------------------|---------------|------------------------------------|---------------|----------------|-----|------------------------------|--------------------------|--------|---------|---------------------|----------|-----------|
| Certification Region | Useful Life   | Standard Level                     | Emission Name | Rounded Result | RAF | NMOG/NM HC Ratio             | Diesel Adjustment Factor | Add DF | Mult DF | Certification Level | Standard | Pass/Fail |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | CO2           | 999            | 1   | --                           | --                       | 0      | --      | 999                 | --       | --        |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | METHANE       | 0.0058         | 1   | --                           | --                       | --     | --      | 0.006               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | N2O           | 0.0014         | 1   | --                           | --                       | --     | --      | 0.001               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | NMOG          | 0.0005         | 1   | 1.03                         | --                       | --     | --      | 0                   | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | NMOG+NOX      | 0.0051         | 1   | --                           | --                       | --     | --      | 0.005               | 0.170    | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | NOX           | 0.0046         | 1   | --                           | --                       | --     | --      | 0.005               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-III SULEV170        | NMOG          | 0.0005         | 1   | 1.03                         | --                       | --     | --      | 0                   | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-III SULEV170        | NMOG+NOX      | 0.0051         | 1   | --                           | --                       | --     | --      | 0.005               | 0.170    | Pass      |
| CA                   | 150,000 miles | California LEV-III SULEV170        | NOX           | 0.0046         | 1   | --                           | --                       | --     | --      | 0.005               | 99.999   | Pass      |

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

## Certification Summary Information Report

| <b>Test Group</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | VGMXD04.3170                                                                                | <b>Evaporative/Refueling Family</b>                      | VGMXR021260A              |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------|---------------------------|------------------|-----------------------|----------------------------------------------------------|----------------------------------|----------|-----|----------------------|---------|----|----------------------------------------------------|----------|----|--------------------------------------------|-----------|----|-------------------------------------------------|----------|----|------------------------------------|------|------|----------------------|----------|----|---------------------|----------|----|---------------------------------|----------|----|----------------------------------|----------|----|------------------------------|----------|----|
| <b>Test #</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>RGMX10079970</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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 03/28/2023                                                                                  | <b>Fuel</b>                                              | Gasoline                  |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| <b>Fuel Batch ID</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 000307                                                                                      | <b>Fuel Calibration Number</b>                           | 9320                      |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| <b>Vehicle Class</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000) | <b>DF Type</b>                                           | Mfr. Determined           |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| <b>Verify Test Lab ID</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Compliance and Certification                                                                |                                                          |                           |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| <b>E10 Evaporative Test Measurement Method</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | --                                                                                          |                                                          |                           |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| <b>Test Start Odometer Reading</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 4079                                                                                        | <b>Odometer Units</b>                                    | M                         |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| <b>4WD Test Dyno</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No                                                                                          | <b>Diesel Adjustment Factor Usage</b>                    | --                        |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| <b>State of Charge Delta</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | No                                                                                          |                                                          |                           |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| <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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                             |                                                          |                           |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
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| Test Result Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Unrounded Test Result                                                                       | Verify Calculated FE Equivalent Value (miles per gallon) |                           |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| METHANE (CH4 - Methane)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.008727                                                                                    | --                                                       |                           |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| CO (Carbon Monoxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.08221                                                                                     | --                                                       |                           |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| DT-ASCR (Drive Trace Absolute Speed Change Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.166813                                                                                    | --                                                       |                           |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| DT-EER (Drive Trace Energy Economy Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | -0.399656                                                                                   | --                                                       |                           |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| DT-IWRR (Drive Trace Inertia Work Ratio Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.308814                                                                                    | --                                                       |                           |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| MFR FE (Manufacturer Fuel Economy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 16.8                                                                                        | 16.8                                                     |                           |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| NOX (Nitrogen Oxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.051867                                                                                    | --                                                       |                           |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| N2O (Nitrous Oxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0.005905                                                                                    | --                                                       |                           |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| HC-NM (Non-methane Hydrocarbon)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.001744                                                                                    | --                                                       |                           |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| NMOG (Non-methane organic gases)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.001796                                                                                    | --                                                       |                           |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| HC-TOTAL (Total Hydrocarbon)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.010054                                                                                    | --                                                       |                           |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
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| Test Result Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Unrounded Test Result                                                                       | Verify Calculated CREE/OPT-CREE                          |                           |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| Carbon-Related Exhaust Emissions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 530                                                                                         | 530                                                      |                           |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
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| Test Result Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Unrounded Test Result                                                                       | Verify Calculated CO2                                    |                           |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| Carbon dioxide                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 529.849                                                                                     | --                                                       |                           |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |
| <b>Manufacturer Test Comments</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 150K EMIS TEST                                                                              |                                                          |                           |                  |                       |                                                          |                                  |          |     |                      |         |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                     |          |    |                                 |          |    |                                  |          |    |                              |          |    |

## Certification Summary Information Report

| Test Group           |               | VGMXD04.3170                       |               |                |     | Evaporative/Refueling Family |                          |        |         | VGMXR021260A        |          |           |
|----------------------|---------------|------------------------------------|---------------|----------------|-----|------------------------------|--------------------------|--------|---------|---------------------|----------|-----------|
| Certification Region | Useful Life   | Standard Level                     | Emission Name | Rounded Result | RAF | NMOG/NM HC Ratio             | Diesel Adjustment Factor | Add DF | Mult DF | Certification Level | Standard | Pass/Fail |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | CO2           | 530            | 1   | --                           | --                       | 0      | --      | 530                 | --       | --        |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | METHANE       | 0.0087         | 1   | --                           | --                       | --     | --      | 0.009               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | N2O           | 0.0059         | 1   | --                           | --                       | --     | --      | 0.006               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | NMOG          | 0.0018         | 1   | 1.03                         | --                       | --     | --      | 0.002               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | NMOG+NOX      | 0.0537         | 1   | --                           | --                       | --     | --      | 0.054               | 0.170    | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | NOX           | 0.0519         | 1   | --                           | --                       | --     | --      | 0.052               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-III SULEV170        | NMOG          | 0.0018         | 1   | 1.03                         | --                       | --     | --      | 0.002               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-III SULEV170        | NMOG+NOX      | 0.0537         | 1   | --                           | --                       | --     | --      | 0.054               | 0.170    | Pass      |
| CA                   | 150,000 miles | California LEV-III SULEV170        | NOX           | 0.0519         | 1   | --                           | --                       | --     | --      | 0.052               | 99.999   | Pass      |

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

## Certification Summary Information Report

|                                                    |                                                                                             |                                                                 |                                                    |
|----------------------------------------------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------|----------------------------------------------------|
| <b>Test Group</b>                                  | VGMXD04.3170                                                                                | <b>Evaporative/Refueling Family</b>                             | VGMXR021260A                                       |
| <b>Test #</b>                                      | <b>RGMX10079967</b>                                                                         | <b>Test Procedure</b>                                           | <b>90 - US06</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>                                   | 03/18/2023                                                                                  | <b>Fuel</b>                                                     | Gasoline                                           |
| <b>Fuel Batch ID</b>                               | 000329                                                                                      | <b>Fuel Calibration Number</b>                                  | 9322                                               |
| <b>Vehicle Class</b>                               | HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000) | <b>DF Type</b>                                                  | Mfr. Determined                                    |
| <b>Verify Test Lab ID</b>                          | Compliance and Certification                                                                |                                                                 |                                                    |
| <b>E10 Evaporative Test Measurement Method</b>     | --                                                                                          |                                                                 |                                                    |
| <b>Test Start Odometer Reading</b>                 | 4028                                                                                        | <b>Odometer Units</b>                                           | M                                                  |
| <b>4WD Test Dyno</b>                               | No                                                                                          | <b>Diesel Adjustment Factor Usage</b>                           | --                                                 |
| <b>State of Charge Delta</b>                       | No                                                                                          |                                                                 |                                                    |
| <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> |                                                    |
| CO2 BAG 1 (Bag 1 Carbon Dioxide)                   | 1289.81                                                                                     | --                                                              |                                                    |
| FE BAG 1 (Bag 1 Fuel Economy)                      | 6.7                                                                                         | 6.7                                                             |                                                    |
| CO2 BAG 2 (Bag 2 Carbon Dioxide)                   | 799.46                                                                                      | --                                                              |                                                    |
| FE BAG 2 (Bag 2 Fuel Economy)                      | 10.9                                                                                        | 10.9                                                            |                                                    |
| METHANE (CH4 - Methane)                            | 0.010421                                                                                    | --                                                              |                                                    |
| CO (Carbon Monoxide)                               | 3.12706                                                                                     | --                                                              |                                                    |
| DT-ASCR (Drive Trace Absolute Speed Change Rating) | -4.34953                                                                                    | --                                                              |                                                    |
| DT-EER (Drive Trace Energy Economy Rating)         | -1.3878                                                                                     | --                                                              |                                                    |
| DT-IWRR (Drive Trace Inertia Work Ratio Rating)    | -8.22906                                                                                    | --                                                              |                                                    |
| MFR FE (Manufacturer Fuel Economy)                 | 9.5                                                                                         | 9.5                                                             |                                                    |
| NOX (Nitrogen Oxide)                               | 0.11664                                                                                     | --                                                              |                                                    |
| HC-NM (Non-methane Hydrocarbon)                    | 0.007999                                                                                    | --                                                              |                                                    |
| NMOG (Non-methane organic gases)                   | 0.008239                                                                                    | --                                                              |                                                    |
| PM (Particulate Matter)                            | 0.00274                                                                                     | --                                                              |                                                    |
| HC-TOTAL (Total Hydrocarbon)                       | 0.017552                                                                                    | --                                                              |                                                    |
| <b>Test Result Name</b>                            | <b>Unrounded Test Result</b>                                                                | <b>Verify Calculated CO2</b>                                    |                                                    |
| Carbon dioxide                                     | 908.319                                                                                     | --                                                              |                                                    |
| <b>Manufacturer Test Comments</b>                  | 150K US06 TEST                                                                              |                                                                 |                                                    |

## Certification Summary Information Report

| Test Group           |               | VGMXD04.3170                       |               |                |     | Evaporative/Refueling Family |                          |        |         | VGMXR021260A        |          |           |
|----------------------|---------------|------------------------------------|---------------|----------------|-----|------------------------------|--------------------------|--------|---------|---------------------|----------|-----------|
| Certification Region | Useful Life   | Standard Level                     | Emission Name | Rounded Result | RAF | NMOG/NM HC Ratio             | Diesel Adjustment Factor | Add DF | Mult DF | Certification Level | Standard | Pass/Fail |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | CO            | 3.13           | 1   | --                           | --                       | --     | --      | 3.1                 | 99.9     | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | NMOG          | 0.0082         | 1   | 1.03                         | --                       | --     | --      | 0.008               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | NMOG+NOX      | 0.1248         | 1   | --                           | --                       | --     | --      | 0.125               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | NOX           | 0.1166         | 1   | --                           | --                       | --     | --      | 0.117               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | PM            | 0.0027         | 1   | --                           | --                       | --     | --      | 0.003               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-III SULEV170        | CO            | 3.13           | 1   | --                           | --                       | --     | --      | 3.1                 | 99.9     | Pass      |
| CA                   | 150,000 miles | California LEV-III SULEV170        | NMOG          | 0.0082         | 1   | 1.03                         | --                       | --     | --      | 0.008               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-III SULEV170        | NMOG+NOX      | 0.1248         | 1   | --                           | --                       | --     | --      | 0.125               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-III SULEV170        | NOX           | 0.1166         | 1   | --                           | --                       | --     | --      | 0.117               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-III SULEV170        | PM            | 0.0027         | 1   | --                           | --                       | --     | --      | 0.003               | 99.999   | Pass      |

## Certification Summary Information Report

| <b>Test Group</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | VGMXD04.3170                                                                                | <b>Evaporative/Refueling Family</b>                      | VGMXR021260A                                       |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------|------------------|-----------------------|----------------------------------------------------------|-------------------------|----------|----|----------------------|----------|----|----------------------------------------------------|----------|----|--------------------------------------------|-----------|----|-------------------------------------------------|----------|----|------------------------------------|------|------|----------------------|----------|----|---------------------------------|----------|----|----------------------------------|----------|----|-------------------------|----------|----|------------------------------|----------|----|
| <b>Test #</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>RGMX10079968</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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 03/22/2023                                                                                  | <b>Fuel</b>                                              | Gasoline                                           |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| <b>Fuel Batch ID</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 000329                                                                                      | <b>Fuel Calibration Number</b>                           | 9322                                               |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| <b>Vehicle Class</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | HDV1 (Federal HD chassis Class 2b GVW 8501-10000), MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000) | <b>DF Type</b>                                           | Mfr. Determined                                    |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| <b>Verify Test Lab ID</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Compliance and Certification                                                                |                                                          |                                                    |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| <b>E10 Evaporative Test Measurement Method</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | --                                                                                          |                                                          |                                                    |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| <b>Test Start Odometer Reading</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4028                                                                                        | <b>Odometer Units</b>                                    | M                                                  |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| <b>4WD Test Dyno</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | No                                                                                          | <b>Diesel Adjustment Factor Usage</b>                    | --                                                 |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| <b>State of Charge Delta</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No                                                                                          |                                                          |                                                    |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| <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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                             |                                                          |                                                    |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| <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>METHANE (CH4 - Methane)</td> <td>0.020083</td> <td>--</td> </tr> <tr> <td>CO (Carbon Monoxide)</td> <td>0.622938</td> <td>--</td> </tr> <tr> <td>DT-ASCR (Drive Trace Absolute Speed Change Rating)</td> <td>-1.23934</td> <td>--</td> </tr> <tr> <td>DT-EER (Drive Trace Energy Economy Rating)</td> <td>-0.862183</td> <td>--</td> </tr> <tr> <td>DT-IWRR (Drive Trace Inertia Work Ratio Rating)</td> <td>-1.41064</td> <td>--</td> </tr> <tr> <td>MFR FE (Manufacturer Fuel Economy)</td> <td>10.8</td> <td>10.8</td> </tr> <tr> <td>NOX (Nitrogen Oxide)</td> <td>0.004654</td> <td>--</td> </tr> <tr> <td>HC-NM (Non-methane Hydrocarbon)</td> <td>0.003766</td> <td>--</td> </tr> <tr> <td>NMOG (Non-methane organic gases)</td> <td>0.003879</td> <td>--</td> </tr> <tr> <td>PM (Particulate Matter)</td> <td>0.000821</td> <td>--</td> </tr> <tr> <td>HC-TOTAL (Total Hydrocarbon)</td> <td>0.022178</td> <td>--</td> </tr> </tbody> </table> |                                                                                             |                                                          |                                                    | Test Result Name | Unrounded Test Result | Verify Calculated FE Equivalent Value (miles per gallon) | METHANE (CH4 - Methane) | 0.020083 | -- | CO (Carbon Monoxide) | 0.622938 | -- | DT-ASCR (Drive Trace Absolute Speed Change Rating) | -1.23934 | -- | DT-EER (Drive Trace Energy Economy Rating) | -0.862183 | -- | DT-IWRR (Drive Trace Inertia Work Ratio Rating) | -1.41064 | -- | MFR FE (Manufacturer Fuel Economy) | 10.8 | 10.8 | NOX (Nitrogen Oxide) | 0.004654 | -- | HC-NM (Non-methane Hydrocarbon) | 0.003766 | -- | NMOG (Non-methane organic gases) | 0.003879 | -- | PM (Particulate Matter) | 0.000821 | -- | HC-TOTAL (Total Hydrocarbon) | 0.022178 | -- |
| Test Result Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Unrounded Test Result                                                                       | Verify Calculated FE Equivalent Value (miles per gallon) |                                                    |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| METHANE (CH4 - Methane)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.020083                                                                                    | --                                                       |                                                    |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| CO (Carbon Monoxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.622938                                                                                    | --                                                       |                                                    |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| DT-ASCR (Drive Trace Absolute Speed Change Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -1.23934                                                                                    | --                                                       |                                                    |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| DT-EER (Drive Trace Energy Economy Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | -0.862183                                                                                   | --                                                       |                                                    |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| DT-IWRR (Drive Trace Inertia Work Ratio Rating)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | -1.41064                                                                                    | --                                                       |                                                    |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| MFR FE (Manufacturer Fuel Economy)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 10.8                                                                                        | 10.8                                                     |                                                    |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| NOX (Nitrogen Oxide)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.004654                                                                                    | --                                                       |                                                    |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| HC-NM (Non-methane Hydrocarbon)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.003766                                                                                    | --                                                       |                                                    |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| NMOG (Non-methane organic gases)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0.003879                                                                                    | --                                                       |                                                    |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| PM (Particulate Matter)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.000821                                                                                    | --                                                       |                                                    |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| HC-TOTAL (Total Hydrocarbon)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.022178                                                                                    | --                                                       |                                                    |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| <table border="1"> <thead> <tr> <th>Test Result Name</th> <th>Unrounded Test Result</th> <th>Verify Calculated CO2</th> </tr> </thead> <tbody> <tr> <td>Carbon dioxide</td> <td>807.462</td> <td>--</td> </tr> </tbody> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                             |                                                          |                                                    | Test Result Name | Unrounded Test Result | Verify Calculated CO2                                    | Carbon dioxide          | 807.462  | -- |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| Test Result Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Unrounded Test Result                                                                       | Verify Calculated CO2                                    |                                                    |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| Carbon dioxide                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 807.462                                                                                     | --                                                       |                                                    |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |
| <b>Manufacturer Test Comments</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 150K SC03 TEST                                                                              |                                                          |                                                    |                  |                       |                                                          |                         |          |    |                      |          |    |                                                    |          |    |                                            |           |    |                                                 |          |    |                                    |      |      |                      |          |    |                                 |          |    |                                  |          |    |                         |          |    |                              |          |    |

## Certification Summary Information Report

| Test Group           |               | VGMXD04.3170                       |               |                |     | Evaporative/Refueling Family |                          |        |         | VGMXR021260A        |          |           |
|----------------------|---------------|------------------------------------|---------------|----------------|-----|------------------------------|--------------------------|--------|---------|---------------------|----------|-----------|
| Certification Region | Useful Life   | Standard Level                     | Emission Name | Rounded Result | RAF | NMOG/NM HC Ratio             | Diesel Adjustment Factor | Add DF | Mult DF | Certification Level | Standard | Pass/Fail |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | CO            | 0.62           | 1   | --                           | --                       | --     | --      | 0.6                 | 99.9     | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | NMOG          | 0.0039         | 1   | 1.03                         | --                       | --     | --      | 0.004               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | NMOG+NOX      | 0.0086         | 1   | --                           | --                       | --     | --      | 0.009               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | NOX           | 0.0047         | 1   | --                           | --                       | --     | --      | 0.005               | 99.999   | Pass      |
| Fed                  | 150,000 miles | Federal Tier 3 HD Class 2b Bin 170 | PM            | 0.0008         | 1   | --                           | --                       | --     | --      | 0.001               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-III SULEV170        | CO            | 0.62           | 1   | --                           | --                       | --     | --      | 0.6                 | 99.9     | Pass      |
| CA                   | 150,000 miles | California LEV-III SULEV170        | NMOG          | 0.0039         | 1   | 1.03                         | --                       | --     | --      | 0.004               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-III SULEV170        | NMOG+NOX      | 0.0086         | 1   | --                           | --                       | --     | --      | 0.009               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-III SULEV170        | NOX           | 0.0047         | 1   | --                           | --                       | --     | --      | 0.005               | 99.999   | Pass      |
| CA                   | 150,000 miles | California LEV-III SULEV170        | PM            | 0.0008         | 1   | --                           | --                       | --     | --      | 0.001               | 99.999   | Pass      |

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## Certification Summary Information Report

|                                    |                                                                                  |                              |              |
|------------------------------------|----------------------------------------------------------------------------------|------------------------------|--------------|
| Test Group                         | VGMXD04.3170                                                                     | Evaporative/Refueling Family | VGMXR021260A |
| Emission Control Device Comments   | G Van                                                                            |                              |              |
| Manufacturer Test Vehicle Comments | ADDED 250LBS BALLAST TO REAR AXLE. MUST BE TESTED WITH ROAD SPEED FAN. 4K CONFIG |                              |              |

## Certification Summary Information Report

| <b>Test Group</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | VGMXD04.3170                              | <b>Evaporative/Refueling Family</b>                      | VGMXR021260A                                       |                  |                       |                                                          |                                |          |    |                             |          |    |                                                           |          |    |                                                   |          |    |                                                        |           |    |                             |          |    |                                        |          |    |                                         |          |    |                                     |          |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------|----------------------------------------------------|------------------|-----------------------|----------------------------------------------------------|--------------------------------|----------|----|-----------------------------|----------|----|-----------------------------------------------------------|----------|----|---------------------------------------------------|----------|----|--------------------------------------------------------|-----------|----|-----------------------------|----------|----|----------------------------------------|----------|----|-----------------------------------------|----------|----|-------------------------------------|----------|----|
| <b>Test #</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>RGMX10080602</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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 03/01/2023                                | <b>Fuel</b>                                              | Gasoline                                           |                  |                       |                                                          |                                |          |    |                             |          |    |                                                           |          |    |                                                   |          |    |                                                        |           |    |                             |          |    |                                        |          |    |                                         |          |    |                                     |          |    |
| <b>Fuel Batch ID</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 000329                                    | <b>Fuel Calibration Number</b>                           | 9322                                               |                  |                       |                                                          |                                |          |    |                             |          |    |                                                           |          |    |                                                   |          |    |                                                        |           |    |                             |          |    |                                        |          |    |                                         |          |    |                                     |          |    |
| <b>Vehicle Class</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)  | <b>DF Type</b>                                           | Mfr. Determined                                    |                  |                       |                                                          |                                |          |    |                             |          |    |                                                           |          |    |                                                   |          |    |                                                        |           |    |                             |          |    |                                        |          |    |                                         |          |    |                                     |          |    |
| <b>Verify Test Lab ID</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Compliance and Certification              |                                                          |                                                    |                  |                       |                                                          |                                |          |    |                             |          |    |                                                           |          |    |                                                   |          |    |                                                        |           |    |                             |          |    |                                        |          |    |                                         |          |    |                                     |          |    |
| <b>E10 Evaporative Test Measurement Method</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | --                                        |                                                          |                                                    |                  |                       |                                                          |                                |          |    |                             |          |    |                                                           |          |    |                                                   |          |    |                                                        |           |    |                             |          |    |                                        |          |    |                                         |          |    |                                     |          |    |
| <b>Test Start Odometer Reading</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 3908                                      | <b>Odometer Units</b>                                    | M                                                  |                  |                       |                                                          |                                |          |    |                             |          |    |                                                           |          |    |                                                   |          |    |                                                        |           |    |                             |          |    |                                        |          |    |                                         |          |    |                                     |          |    |
| <b>4WD Test Dyno</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No                                        | <b>Diesel Adjustment Factor Usage</b>                    | --                                                 |                  |                       |                                                          |                                |          |    |                             |          |    |                                                           |          |    |                                                   |          |    |                                                        |           |    |                             |          |    |                                        |          |    |                                         |          |    |                                     |          |    |
| <b>State of Charge Delta</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No                                        |                                                          |                                                    |                  |                       |                                                          |                                |          |    |                             |          |    |                                                           |          |    |                                                   |          |    |                                                        |           |    |                             |          |    |                                        |          |    |                                         |          |    |                                     |          |    |
| <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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                           |                                                          |                                                    |                  |                       |                                                          |                                |          |    |                             |          |    |                                                           |          |    |                                                   |          |    |                                                        |           |    |                             |          |    |                                        |          |    |                                         |          |    |                                     |          |    |
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| Test Result Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Unrounded Test Result                     | Verify Calculated FE Equivalent Value (miles per gallon) |                                                    |                  |                       |                                                          |                                |          |    |                             |          |    |                                                           |          |    |                                                   |          |    |                                                        |           |    |                             |          |    |                                        |          |    |                                         |          |    |                                     |          |    |
| <b>METHANE (CH4 - Methane)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.019542                                  | --                                                       |                                                    |                  |                       |                                                          |                                |          |    |                             |          |    |                                                           |          |    |                                                   |          |    |                                                        |           |    |                             |          |    |                                        |          |    |                                         |          |    |                                     |          |    |
| <b>CO (Carbon Monoxide)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.621843                                  | --                                                       |                                                    |                  |                       |                                                          |                                |          |    |                             |          |    |                                                           |          |    |                                                   |          |    |                                                        |           |    |                             |          |    |                                        |          |    |                                         |          |    |                                     |          |    |
| <b>DT-ASCR (Drive Trace Absolute Speed Change Rating)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | -0.44179                                  | --                                                       |                                                    |                  |                       |                                                          |                                |          |    |                             |          |    |                                                           |          |    |                                                   |          |    |                                                        |           |    |                             |          |    |                                        |          |    |                                         |          |    |                                     |          |    |
| <b>DT-EER (Drive Trace Energy Economy Rating)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | -0.81764                                  | --                                                       |                                                    |                  |                       |                                                          |                                |          |    |                             |          |    |                                                           |          |    |                                                   |          |    |                                                        |           |    |                             |          |    |                                        |          |    |                                         |          |    |                                     |          |    |
| <b>DT-IWRR (Drive Trace Inertia Work Ratio Rating)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | -0.550946                                 | --                                                       |                                                    |                  |                       |                                                          |                                |          |    |                             |          |    |                                                           |          |    |                                                   |          |    |                                                        |           |    |                             |          |    |                                        |          |    |                                         |          |    |                                     |          |    |
| <b>NOX (Nitrogen Oxide)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.030965                                  | --                                                       |                                                    |                  |                       |                                                          |                                |          |    |                             |          |    |                                                           |          |    |                                                   |          |    |                                                        |           |    |                             |          |    |                                        |          |    |                                         |          |    |                                     |          |    |
| <b>HC-NM (Non-methane Hydrocarbon)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.109221                                  | --                                                       |                                                    |                  |                       |                                                          |                                |          |    |                             |          |    |                                                           |          |    |                                                   |          |    |                                                        |           |    |                             |          |    |                                        |          |    |                                         |          |    |                                     |          |    |
| <b>NMOG (Non-methane organic gases)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.120111                                  | --                                                       |                                                    |                  |                       |                                                          |                                |          |    |                             |          |    |                                                           |          |    |                                                   |          |    |                                                        |           |    |                             |          |    |                                        |          |    |                                         |          |    |                                     |          |    |
| <b>HC-TOTAL (Total Hydrocarbon)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.128117                                  | --                                                       |                                                    |                  |                       |                                                          |                                |          |    |                             |          |    |                                                           |          |    |                                                   |          |    |                                                        |           |    |                             |          |    |                                        |          |    |                                         |          |    |                                     |          |    |
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| Test Result Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Unrounded Test Result                     | Verify Calculated CO2                                    |                                                    |                  |                       |                                                          |                                |          |    |                             |          |    |                                                           |          |    |                                                   |          |    |                                                        |           |    |                             |          |    |                                        |          |    |                                         |          |    |                                     |          |    |
| <b>Carbon dioxide</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 691.834                                   | --                                                       |                                                    |                  |                       |                                                          |                                |          |    |                             |          |    |                                                           |          |    |                                                   |          |    |                                                        |           |    |                             |          |    |                                        |          |    |                                         |          |    |                                     |          |    |
| <b>Manufacturer Test Comments</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 4K 50 DEG TEST                            |                                                          |                                                    |                  |                       |                                                          |                                |          |    |                             |          |    |                                                           |          |    |                                                   |          |    |                                                        |           |    |                             |          |    |                                        |          |    |                                         |          |    |                                     |          |    |

## Certification Summary Information Report

| Test Group           |             | VGMXD04.3170                |               |                |     | Evaporative/Refueling Family |                          |        |         | VGMXR021260A        |          |           |
|----------------------|-------------|-----------------------------|---------------|----------------|-----|------------------------------|--------------------------|--------|---------|---------------------|----------|-----------|
| 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-III SULEV170 | CO            | 0.62           | 1   | --                           | --                       | --     | --      | 0.6                 | 4.2      | Pass      |
| CA                   | 4,000 miles | California LEV-III SULEV170 | NMOG          | 0.1201         | 1   | --                           | --                       | --     | --      | 0.12                | 99.999   | Pass      |
| CA                   | 4,000 miles | California LEV-III SULEV170 | NMOG+NOX      | 0.1511         | 1   | --                           | --                       | --     | --      | 0.151               | 0.340    | Pass      |
| CA                   | 4,000 miles | California LEV-III SULEV170 | NOX           | 0.031          | 1   | --                           | --                       | --     | --      | 0.031               | 99.999   | Pass      |

  

|                                                                           |  |  |                                                    |  |  |  |                                                                           |  |  |             |  |  |
|---------------------------------------------------------------------------|--|--|----------------------------------------------------|--|--|--|---------------------------------------------------------------------------|--|--|-------------|--|--|
| <b>Fuel Properties</b>                                                    |  |  |                                                    |  |  |  |                                                                           |  |  |             |  |  |
| <b>Fuel Batch ID</b>                                                      |  |  | <b>000329</b>                                      |  |  |  | <b>Fuel Calibration Number</b>                                            |  |  | <b>9322</b> |  |  |
| <b>Test Fuel Type</b>                                                     |  |  | 48 - Tier 3 E10 Regular Gasoline (9 RVP @Low Alt.) |  |  |  | <b>Fuel Batch Calibration Date</b>                                        |  |  | 10/17/2022  |  |  |
| <b>Fuel Batch Calibration Effective Date</b>                              |  |  | 10/17/2022                                         |  |  |  | <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>                                              |  |  | 0.745       |  |  |
| <b>Fuel Ethanol Volume Percent (%)</b>                                    |  |  | 9.8                                                |  |  |  | <b>Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)</b> |  |  | 17787       |  |  |
| <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> |  |  | 0.828                                              |  |  |  | <b>Weight Fraction CO2</b>                                                |  |  | --          |  |  |
| <b>Fuel Batch ID</b>                                                      |  |  | <b>000307</b>                                      |  |  |  | <b>Fuel Calibration Number</b>                                            |  |  | <b>9320</b> |  |  |
| <b>Test Fuel Type</b>                                                     |  |  | 61 - Tier 2 Cert Gasoline                          |  |  |  | <b>Fuel Batch Calibration Date</b>                                        |  |  | 10/10/2022  |  |  |
| <b>Fuel Batch Calibration Effective Date</b>                              |  |  | 10/10/2022                                         |  |  |  | <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>                                              |  |  | 0.744       |  |  |
| <b>Fuel Ethanol Volume Percent (%)</b>                                    |  |  | --                                                 |  |  |  | <b>Fuel Net Heating Value / Fuel Net Heat of Combustion (E0) (BTU/lb)</b> |  |  | 18427       |  |  |
| <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> |  |  | 0.867                                              |  |  |  | <b>Weight Fraction CO2</b>                                                |  |  | --          |  |  |

## Certification Summary Information Report

|                                |               |                                                   |     |             |                                 |                                   |                                    |        |         |
|--------------------------------|---------------|---------------------------------------------------|-----|-------------|---------------------------------|-----------------------------------|------------------------------------|--------|---------|
| Test Group                     |               | VGMXD04.3170                                      |     |             | Evaporative/Refueling Family    |                                   | VGMXR021260A                       |        |         |
| Consolidated List of Standards |               |                                                   |     |             |                                 |                                   |                                    |        |         |
| Exhaust Standards              |               |                                                   |     |             |                                 |                                   |                                    |        |         |
| Cert Region                    |               | Federal                                           |     |             | Cert/In-Use Code                |                                   | Cert                               |        |         |
| Vehicle Class                  |               | HDV1 (Federal HD chassis Class 2b GVW 8501-10000) |     |             | Standard Level                  |                                   | Federal Tier 3 HD Class 2b Bin 170 |        |         |
| Fuel                           |               | Gasoline                                          |     |             | Test Procedure                  |                                   | Federal fuel 3-day exhaust         |        |         |
| 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            | --                                                | 1   | --          | --                              | --                                | --                                 | --     | 4.2     |
| 150,000 miles                  | CO-COMP       | --                                                | 1   | --          | --                              | --                                | --                                 | --     | 12.0    |
| 150,000 miles                  | CO2           | --                                                | 1   | --          | --                              | --                                | --                                 | 0      | 999.999 |
| 150,000 miles                  | METHANE       | --                                                | 1   | --          | --                              | --                                | --                                 | --     | 99.999  |
| 150,000 miles                  | N2O           | --                                                | 1   | --          | --                              | --                                | --                                 | --     | 99.999  |
| 150,000 miles                  | NMOG          | --                                                | 1   | --          | --                              | --                                | --                                 | --     | 99.999  |
| 150,000 miles                  | NMOG+NOX      | --                                                | 1   | --          | --                              | --                                | 1                                  | --     | 0.170   |
| 150,000 miles                  | NMOG+NOX-COMP | --                                                | 1   | --          | --                              | --                                | --                                 | --     | 0.450   |
| 150,000 miles                  | NOX           | --                                                | 1   | --          | --                              | --                                | --                                 | --     | 99.999  |
| 150,000 miles                  | PM            | --                                                | 1   | --          | --                              | --                                | --                                 | --     | 0.008   |
| 150,000 miles                  | PM-COMP       | --                                                | 1   | --          | --                              | --                                | --                                 | --     | 0.010   |
|                                |               |                                                   |     |             |                                 |                                   |                                    |        |         |
| Cert Region                    |               | Federal                                           |     |             | Cert/In-Use Code                |                                   | Cert                               |        |         |
| Vehicle Class                  |               | HDV1 (Federal HD chassis Class 2b GVW 8501-10000) |     |             | Standard Level                  |                                   | Federal Tier 3 HD Class 2b Bin 170 |        |         |
| Fuel                           |               | Gasoline                                          |     |             | Test Procedure                  |                                   | SC03                               |        |         |
| Useful Life                    | Emission Name | Rounded Result                                    | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF                            | Add DF | Std     |
| 150,000 miles                  | CO            | --                                                | 1   | --          | --                              | --                                | --                                 | --     | 99.9    |
| 150,000 miles                  | NMOG          | --                                                | 1   | 1.03        | --                              | --                                | --                                 | --     | 99.999  |
| 150,000 miles                  | NMOG+NOX      | --                                                | 1   | --          | --                              | --                                | 1                                  | --     | 99.999  |
| 150,000 miles                  | NOX           | --                                                | 1   | --          | --                              | --                                | --                                 | --     | 99.999  |
| 150,000 miles                  | PM            | --                                                | 1   | --          | --                              | --                                | --                                 | --     | 99.999  |
|                                |               |                                                   |     |             |                                 |                                   |                                    |        |         |

## Certification Summary Information Report

|                      |                      |                                                   |            |                    |                                        |                                          |                |                                    |            |
|----------------------|----------------------|---------------------------------------------------|------------|--------------------|----------------------------------------|------------------------------------------|----------------|------------------------------------|------------|
| <b>Test Group</b>    |                      | VGMXD04.3170                                      |            |                    | <b>Evaporative/Refueling Family</b>    |                                          |                | VGMXR021260A                       |            |
| <b>Cert Region</b>   |                      | California + CAA Section 177 states               |            |                    | <b>Cert/In-Use Code</b>                |                                          |                | Cert                               |            |
| <b>Vehicle Class</b> |                      | MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)          |            |                    | <b>Standard Level</b>                  |                                          |                | California LEV-III SULEV170        |            |
| <b>Fuel</b>          |                      | Gasoline                                          |            |                    | <b>Test Procedure</b>                  |                                          |                | SC03                               |            |
| <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                   | --                                                | 1          | --                 | --                                     | --                                       | --             | --                                 | 99.9       |
| 150,000 miles        | NMOG                 | --                                                | 1          | 1.03               | --                                     | --                                       | --             | --                                 | 99.999     |
| 150,000 miles        | NMOG+NOX             | --                                                | 1          | --                 | --                                     | --                                       | 1              | --                                 | 99.999     |
| 150,000 miles        | NOX                  | --                                                | 1          | --                 | --                                     | --                                       | --             | --                                 | 99.999     |
| 150,000 miles        | PM                   | --                                                | 1          | --                 | --                                     | --                                       | --             | --                                 | 99.999     |
|                      |                      |                                                   |            |                    |                                        |                                          |                |                                    |            |
| <b>Cert Region</b>   |                      | Federal                                           |            |                    | <b>Cert/In-Use Code</b>                |                                          |                | Cert                               |            |
| <b>Vehicle Class</b> |                      | HDV1 (Federal HD chassis Class 2b GVW 8501-10000) |            |                    | <b>Standard Level</b>                  |                                          |                | Federal Tier 3 HD Class 2b Bin 170 |            |
| <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> |
| 150,000 miles        | CO2                  | --                                                | 1          | --                 | --                                     | --                                       | --             | 0                                  | 999.999    |
| 150,000 miles        | METHANE              | --                                                | 1          | --                 | --                                     | --                                       | --             | --                                 | 99.999     |
| 150,000 miles        | N2O                  | --                                                | 1          | --                 | --                                     | --                                       | --             | --                                 | 99.999     |
| 150,000 miles        | NMOG                 | --                                                | 1          | 1.03               | --                                     | --                                       | --             | --                                 | 99.999     |
| 150,000 miles        | NMOG+NOX             | --                                                | 1          | --                 | --                                     | --                                       | 1              | --                                 | 0.170      |
| 150,000 miles        | NOX                  | --                                                | 1          | --                 | --                                     | --                                       | --             | --                                 | 99.999     |
|                      |                      |                                                   |            |                    |                                        |                                          |                |                                    |            |
| <b>Cert Region</b>   |                      | California + CAA Section 177 states               |            |                    | <b>Cert/In-Use Code</b>                |                                          |                | Cert                               |            |
| <b>Vehicle Class</b> |                      | MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000)          |            |                    | <b>Standard Level</b>                  |                                          |                | California LEV-III SULEV170        |            |
| <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> |
| 150,000 miles        | NMOG                 | --                                                | 1          | 1.03               | --                                     | --                                       | --             | --                                 | 99.999     |
| 150,000 miles        | NMOG+NOX             | --                                                | 1          | --                 | --                                     | --                                       | 1              | --                                 | 0.170      |
| 150,000 miles        | NOX                  | --                                                | 1          | --                 | --                                     | --                                       | --             | --                                 | 99.999     |

## Certification Summary Information Report

|                      |                      |                                          |            |                    |                                        |                                          |                |                             |            |
|----------------------|----------------------|------------------------------------------|------------|--------------------|----------------------------------------|------------------------------------------|----------------|-----------------------------|------------|
| <b>Test Group</b>    |                      | VGMXD04.3170                             |            |                    | <b>Evaporative/Refueling Family</b>    |                                          |                | VGMXR021260A                |            |
| <b>Cert Region</b>   |                      | California + CAA Section 177 states      |            |                    | <b>Cert/In-Use Code</b>                |                                          |                | Cert                        |            |
| <b>Vehicle Class</b> |                      | MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000) |            |                    | <b>Standard Level</b>                  |                                          |                | California LEV-III SULEV170 |            |
| <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                   | --                                       | 1          | --                 | --                                     | --                                       | --             | --                          | 99.9       |
| 150,000 miles        | NMOG                 | --                                       | 1          | 1.03               | --                                     | --                                       | --             | --                          | 99.999     |
| 150,000 miles        | NMOG+NOX             | --                                       | 1          | --                 | --                                     | --                                       | 1              | --                          | 99.999     |
| 150,000 miles        | NOX                  | --                                       | 1          | --                 | --                                     | --                                       | --             | --                          | 99.999     |
| 150,000 miles        | PM                   | --                                       | 1          | --                 | --                                     | --                                       | --             | --                          | 99.999     |

|                      |                      |                                          |            |                    |                                        |                                          |                |                             |            |
|----------------------|----------------------|------------------------------------------|------------|--------------------|----------------------------------------|------------------------------------------|----------------|-----------------------------|------------|
| <b>Cert Region</b>   |                      | California + CAA Section 177 states      |            |                    | <b>Cert/In-Use Code</b>                |                                          |                | Cert                        |            |
| <b>Vehicle Class</b> |                      | MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000) |            |                    | <b>Standard Level</b>                  |                                          |                | California LEV-III SULEV170 |            |
| <b>Fuel</b>          |                      | Gasoline                                 |            |                    | <b>Test Procedure</b>                  |                                          |                | Federal fuel 3-day exhaust  |            |
| <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                   | --                                       | 1          | --                 | --                                     | --                                       | --             | --                          | 4.2        |
| 150,000 miles        | CO-COMP              | --                                       | 1          | --                 | --                                     | --                                       | --             | --                          | 12.0       |
| 150,000 miles        | NMOG                 | --                                       | 1          | --                 | --                                     | --                                       | --             | --                          | 99.999     |
| 150,000 miles        | NMOG+NOX             | --                                       | 1          | --                 | --                                     | --                                       | 1              | --                          | 0.170      |
| 150,000 miles        | NMOG+NOX-COMP        | --                                       | 1          | --                 | --                                     | --                                       | --             | --                          | 0.450      |
| 150,000 miles        | NOX                  | --                                       | 1          | --                 | --                                     | --                                       | --             | --                          | 99.999     |
| 150,000 miles        | PM                   | --                                       | 1          | --                 | --                                     | --                                       | --             | --                          | 0.008      |
| 150,000 miles        | PM-COMP              | --                                       | 1          | --                 | --                                     | --                                       | --             | --                          | 0.010      |

## Certification Summary Information Report

|                      |                      |                                                   |            |                    |                                        |                                          |                |                                    |            |
|----------------------|----------------------|---------------------------------------------------|------------|--------------------|----------------------------------------|------------------------------------------|----------------|------------------------------------|------------|
| <b>Test Group</b>    |                      | VGMXD04.3170                                      |            |                    | <b>Evaporative/Refueling Family</b>    |                                          |                | VGMXR021260A                       |            |
| <b>Cert Region</b>   |                      | Federal                                           |            |                    | <b>Cert/In-Use Code</b>                |                                          |                | Cert                               |            |
| <b>Vehicle Class</b> |                      | HDV1 (Federal HD chassis Class 2b GVW 8501-10000) |            |                    | <b>Standard Level</b>                  |                                          |                | Federal Tier 3 HD Class 2b Bin 170 |            |
| <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                   | --                                                | 1          | --                 | --                                     | --                                       | --             | --                                 | 99.9       |
| 150,000 miles        | NMOG                 | --                                                | 1          | 1.03               | --                                     | --                                       | --             | --                                 | 99.999     |
| 150,000 miles        | NMOG+NOX             | --                                                | 1          | --                 | --                                     | --                                       | 1              | --                                 | 99.999     |
| 150,000 miles        | NOX                  | --                                                | 1          | --                 | --                                     | --                                       | --             | --                                 | 99.999     |
| 150,000 miles        | PM                   | --                                                | 1          | --                 | --                                     | --                                       | --             | --                                 | 99.999     |

|                      |                      |                                          |            |                    |                                        |                                          |                |                             |            |
|----------------------|----------------------|------------------------------------------|------------|--------------------|----------------------------------------|------------------------------------------|----------------|-----------------------------|------------|
| <b>Cert Region</b>   |                      | California + CAA Section 177 states      |            |                    | <b>Cert/In-Use Code</b>                |                                          |                | Cert                        |            |
| <b>Vehicle Class</b> |                      | MDV6 (Cal. LEV 2/3/4 MDV GVW 8501-10000) |            |                    | <b>Standard Level</b>                  |                                          |                | California LEV-III SULEV170 |            |
| <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                   | --                                       | 1          | --                 | --                                     | --                                       | --             | --                          | 4.2        |
| 4,000 miles          | NMOG                 | --                                       | 1          | --                 | --                                     | --                                       | --             | --                          | 99.999     |
| 4,000 miles          | NMOG+NOX             | --                                       | 1          | --                 | --                                     | --                                       | 1              | --                          | 0.340      |
| 4,000 miles          | NOX                  | --                                       | 1          | --                 | --                                     | --                                       | --             | --                          | 99.999     |

## Evaporative/Refueling Standards

|                                     |                    |                          |                       |                       |               |                     |  |
|-------------------------------------|--------------------|--------------------------|-----------------------|-----------------------|---------------|---------------------|--|
| <b>Evaporative/Refueling Family</b> |                    | VGMXR021260A             |                       | <b>Cert Region</b>    |               | Federal             |  |
| <b>Cert/In-Use Code</b>             |                    | Cert                     |                       | <b>Standard Level</b> |               | Federal Tier 3 Evap |  |
| <b>Test Procedure</b>               |                    | Evap Canister Bleed Test |                       |                       |               |                     |  |
| <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                 | --                    | 0.030                 | 0             |                     |  |

|                              |               |                         |                |                |        |                                         |  |
|------------------------------|---------------|-------------------------|----------------|----------------|--------|-----------------------------------------|--|
| Evaporative/Refueling Family |               | VGMXR021260A            |                | Cert Region    |        | California + CAA Section 177 states     |  |
| Cert/In-Use Code             |               | Cert                    |                | Standard Level |        | California LEV-III Zero Evap (Option 2) |  |
| Test Procedure               |               | Federal fuel 3-day evap |                |                |        |                                         |  |
| Fuel                         | Useful Life   | Emission Name           | Rounded Result | Std            | Add DF |                                         |  |
| Gasoline                     | 150,000 miles | HC-TOTAL-EQUIV          | --             | 0.600          | 0      |                                         |  |

## Certification Summary Information Report

|                              |               |                                    |                |                              |        |                                         |  |
|------------------------------|---------------|------------------------------------|----------------|------------------------------|--------|-----------------------------------------|--|
| Test Group                   |               | VGMXD04.3170                       |                | Evaporative/Refueling Family |        | VGMXR021260A                            |  |
| Evaporative/Refueling Family |               | VGMXR021260A                       |                | Cert Region                  |        | California + CAA Section 177 states     |  |
| Cert/In-Use Code             |               | Cert                               |                | Standard Level               |        | California LEV-III Zero Evap (Option 2) |  |
| Test Procedure               |               | Federal fuel refueling test (ORVR) |                |                              |        |                                         |  |
| Fuel                         | Useful Life   | Emission Name                      | Rounded Result | Std                          | Add DF |                                         |  |
| Gasoline                     | 150,000 miles | HC-TOTAL-EQUIV                     | --             | 0.20                         | 0      |                                         |  |
|                              |               |                                    |                |                              |        |                                         |  |
| Evaporative/Refueling Family |               | VGMXR021260A                       |                | Cert Region                  |        | California + CAA Section 177 states     |  |
| Cert/In-Use Code             |               | Cert                               |                | Standard Level               |        | California LEV-III Zero Evap (Option 2) |  |
| Test Procedure               |               | Federal Fuel Running Loss          |                |                              |        |                                         |  |
| Fuel                         | Useful Life   | Emission Name                      | Rounded Result | Std                          | Add DF |                                         |  |
| Gasoline                     | 150,000 miles | HC-TOTAL-EQUIV                     | --             | 0.05                         | 0      |                                         |  |
|                              |               |                                    |                |                              |        |                                         |  |
| Evaporative/Refueling Family |               | VGMXR021260A                       |                | Cert Region                  |        | Federal                                 |  |
| Cert/In-Use Code             |               | Cert                               |                | Standard Level               |        | Federal Tier 3 Evap                     |  |
| Test Procedure               |               | Federal fuel 3-day evap            |                |                              |        |                                         |  |
| Fuel                         | Useful Life   | Emission Name                      | Rounded Result | Std                          | Add DF |                                         |  |
| Gasoline                     | 150,000 miles | HC-TOTAL-EQUIV                     | --             | 0.600                        | 0      |                                         |  |
|                              |               |                                    |                |                              |        |                                         |  |
| Evaporative/Refueling Family |               | VGMXR021260A                       |                | Cert Region                  |        | Federal                                 |  |
| Cert/In-Use Code             |               | Cert                               |                | Standard Level               |        | Federal Tier 3 Evap                     |  |
| Test Procedure               |               | Federal Fuel Running Loss          |                |                              |        |                                         |  |
| Fuel                         | Useful Life   | Emission Name                      | Rounded Result | Std                          | Add DF |                                         |  |
| Gasoline                     | 150,000 miles | HC-TOTAL-EQUIV                     | --             | 0.05                         | 0      |                                         |  |
|                              |               |                                    |                |                              |        |                                         |  |
| Evaporative/Refueling Family |               | VGMXR021260A                       |                | Cert Region                  |        | Federal                                 |  |
| Cert/In-Use Code             |               | Cert                               |                | Standard Level               |        | Federal Tier 3 Evap                     |  |
| Test Procedure               |               | 2-day evap                         |                |                              |        |                                         |  |
| Fuel                         | Useful Life   | Emission Name                      | Rounded Result | Std                          | Add DF |                                         |  |
| Gasoline                     | 150,000 miles | HC-TOTAL-EQUIV                     | --             | 0.600                        | 0      |                                         |  |
|                              |               |                                    |                |                              |        |                                         |  |

## Certification Summary Information Report

|                              |               |                                    |                |                              |        |                                         |  |
|------------------------------|---------------|------------------------------------|----------------|------------------------------|--------|-----------------------------------------|--|
| Test Group                   |               | VGMXD04.3170                       |                | Evaporative/Refueling Family |        | VGMXR021260A                            |  |
| Evaporative/Refueling Family |               | VGMXR021260A                       |                | Cert Region                  |        | California + CAA Section 177 states     |  |
| Cert/In-Use Code             |               | Cert                               |                | Standard Level               |        | California LEV-III Zero Evap (Option 2) |  |
| Test Procedure               |               | Evap Canister Bleed Test           |                |                              |        |                                         |  |
| Fuel                         | Useful Life   | Emission Name                      | Rounded Result | Std                          | Add DF |                                         |  |
| Gasoline                     | 150,000 miles | HC-TOTAL                           | --             | 0.030                        | 0      |                                         |  |
|                              |               |                                    |                |                              |        |                                         |  |
| Evaporative/Refueling Family |               | VGMXR021260A                       |                | Cert Region                  |        | Federal                                 |  |
| Cert/In-Use Code             |               | Cert                               |                | Standard Level               |        | Federal Tier 3 Evap                     |  |
| Test Procedure               |               | Federal fuel refueling test (ORVR) |                |                              |        |                                         |  |
| Fuel                         | Useful Life   | Emission Name                      | Rounded Result | Std                          | Add DF |                                         |  |
| Gasoline                     | 150,000 miles | HC-TOTAL-EQUIV                     | --             | 0.20                         | 0      |                                         |  |
|                              |               |                                    |                |                              |        |                                         |  |
| Evaporative/Refueling Family |               | VGMXR021260A                       |                | Cert Region                  |        | California + CAA Section 177 states     |  |
| Cert/In-Use Code             |               | Cert                               |                | Standard Level               |        | California LEV-III Zero Evap (Option 2) |  |
| Test Procedure               |               | 2-day evap                         |                |                              |        |                                         |  |
| Fuel                         | Useful Life   | Emission Name                      | Rounded Result | Std                          | Add DF |                                         |  |
| Gasoline                     | 150,000 miles | HC-TOTAL-EQUIV                     | --             | 0.600                        | 0      |                                         |  |

## Certification Summary Information Report

| Test Group           |                                                                 | VGMXD04.3170       | Evaporative/Refueling Family                       | VGMXR021260A |
|----------------------|-----------------------------------------------------------------|--------------------|----------------------------------------------------|--------------|
| 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                             |                                                            | VGMXD04.3170 | Evaporative/Refueling Family |                                                 | VGMXR021260A |
|----------------------------------------|------------------------------------------------------------|--------------|------------------------------|-------------------------------------------------|--------------|
| 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                    |                                                                   | VGMXD04.3170 | Evaporative/Refueling Family                             |                            | VGMXR021260A |
|-------------------------------|-------------------------------------------------------------------|--------------|----------------------------------------------------------|----------------------------|--------------|
| 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                    |                                 | VGMXD04.3170 | Evaporative/Refueling Family |                                  | VGMXR021260A |
|-------------------------------|---------------------------------|--------------|------------------------------|----------------------------------|--------------|
| 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                     |              |