Mercedes-Benz

# Application for Certification – Part 1
# 2015 Model Year

## Specific Sections

## Test Group
## FMBXT02.1U2A

| | | |
|---|---|---|
| **Durability Group:** | FMBXDPDNNPP4 | |
| **Evaporative Family:** | N/A | |
| **EPA Summary Sheet No.:** | CSI-FMBXT02.1U2A | |
| **Durability Group Description:** | Diesel Cycle - Four Stroke - water cooled –<br>Piston-diesel – direct injection<br>Pt Oxidation Catalyst (OC)<br>Diesel Particulate Filter (DPF)<br>Selective Catalytic Reduction Catalyst (SCRC) | |
| **Test Group Description(s):** | 2.1 L I4 | |
| **Applicable Standards:** | Federal State: | T2 BIN 5 LDT3 (LDT4 certified to LDT3) |
| | California: | ULEV II LDT2 |
| **OBD Group Name:** | CR4X | |
| **Vehicle(s) Covered:** | ML 250 BLUETEC 4MATIC | |
| **Vehicles Tested:** | Exhaust: | W166DE22TC 4x4 - Z4011 |
| | Evap: | N/A |

## EPA Response Requested By:


Brian FitzGerald, Phone: (734) 997-2002

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**Revisions:**

| Issue Date / Revision Date | Affected Pages | Description of Changes |
|---|---|---|
| Jun-13-14 | all | Initial Version |
| Jul-29-14 | p21 | VECI & SMOG |
| Aug-08-14 | p3 | S-06: Certified models |
| Aug-11-14 | p20-21 & CSI | CSS/CRS/CSI |

## S-01: Correspondence

(refer to S-01 in common section for a complete list of contacts)


Ashim Manchanda
Manager, Government Liaison, CARB
Resp.: CARB Liaison
Phone: 310.547.6033, Fax: 310.518.3060
e-mail: ashim.manchanda@daimler.com

Brian FitzGerald
Manager, Government Liaison, EPA
Resp.: EPA Liaison
Phone: 734.997.2002, Fax: 734.995.1342
e-mail: brian.fitzgerald@daimler.com


## S-02: Durability Group Description

Please refer to the common application for certification.

## S-03: Evaporative/Refueling Family Description

ORVR Testing Waiver per CFR § 86.1810-01 (k) + (m)
Due to the low vapor pressure of diesel fuel and the vehicle tank temperatures, hydrocarbon vapor concentrations are low and the vehicle meets the 0.20 grams/gallon refueling emission standard without a control system.

## S-04: Durability Procedure Description

Please refer to the common application for certification.

## S-05: Test Group Description

The summary sheet numbers are provided on the cover page of this application. The Test Group Description is provided in section 2 of the common application as part of the durability group description.

## S-06: Test Vehicle Description

| vehicle use | car number | vehicle type | engine displ. [$cm^3$] | engine code | transm. | ETW [lbs] | exhaust emission control system |
|---|---|---|---|---|---|---|---|
| EDV-Ex | W166-Z4011 | W166DE22TC 4x4 | 2143 | OM651-22 | L-7 | 5500 | DFI/TC/CAC/EGR/EGRC/OC/DPF/SCRC/NOXS(2)/WR-HO2S |
| DDV-Ex | W166-Z4001 | W166DE22TC 4x4 | 2143 | OM651-22 | L-7 | 5500 | DFI/TC/CAC/EGR/EGRC/OC/DPF/SCRC/NOXS(2)/WR-HO2S |

Test parameters can be taken from the Verify Summary sheets in section S-07.

Certified Models

| Test Group | Veh. Code | Model Name | Curb Weight /full Tank | GVW [lbs] | LVW [lbs] | ALVW [lbs] | EPA/ CARB Car Class |
|---|---|---|---|---|---|---|---|
| FMBXT02.1U2A | W166DE22TC 4X4 | ML 250 BLUETEC 4MATIC (Base) | 5017 | 6504 | 5317 | 5761 | T2 BIN 5 LDT3/ ULEV II LDT2 |
| | | ML 250 BLUETEC 4MATIC | 5113 | 6504 | 5413 | 5809 | T2 BIN 5 LDT4 Certified to LDT3 Standards / ULEV II LDT2 |

## VI sheet Exhaust EDV

Verify Processing Report

### Verify Processing Report

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

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

### Test Vehicle Information Submission

#### Test Vehicle Information Details

**Information Process Code :** C
**EPA Manufacturer Code :** MBX
**Vehicle Identification Text :** W166DE22TC-Z4011
**Vehicle Configuration Number :** 0

#### Vehicle Configuration Details

##### Vehicle Description Details

**Manufacturer Vehicle Configuration Number :** 0
**Test Group Name :** FMBXT02.1U2A
**Model Year :** 2015
**Actual Test Vehicle Make Text :** Mercedes-Benz
**Actual Test Vehicle Model Text :** ML 250 BlueTEC 4MATIC

##### Drive Source Details

**Drive Source Identifier :** C
**Fuel Identifier :** D

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

##### Odometer Correction Details

**Correction Initial Value :** 125
**Correction Factor Value :** 0.98
**Correction Sign Identifier :** -
**Correction Units Code :** M

**Engine Code Text :** OM651-22
**Engine Rated Horsepower Value :** 201
**Engine Displacement Value :** 2.143

##### Air Aspiration Details

**Air Aspiration Method Identifier :** TC
**Air Aspiration Device Count :** 1
**Air Aspiration Configuration Identifier :** N

**Charge Air Cooler Identifier :** A

##### Vehicle Specifications Details

**Curb Weight Value :** 5162

Verify Processing Report

**Equivalent Test Weight Value :** 5500
**NV Ratio Value :** 28.1
**Axle Ratio Value :** 3.27

### Transmission Specifications Details

**Light Duty Transmission Type Identifier :** A
**Transmission Lockup Indicator :** Y
**Transmission Creeper Gear Indicator :** N
**Transmission Gear Count :** 7

### Target Set Coefficient Details

**Test Procedure Dynamometer Coefficients Category :** Cold-CO
**Target CoefficientA Value :** 53.220
**Target CoefficientB Value :** 1.63155
**Target CoefficientC Value :** 0.015313
**Set CoefficientA Value :** 25.673
**Set CoefficientB Value :** 0.55391
**Set CoefficientC Value :** 0.025287

### Target Set Coefficient Details

**Test Procedure Dynamometer Coefficients Category :** US06
**Target CoefficientA Value :** 47.9
**Target CoefficientB Value :** 1.468
**Target CoefficientC Value :** 0.0138
**Set CoefficientA Value :** 24.796
**Set CoefficientB Value :** 0.71020
**Set CoefficientC Value :** 0.020722

### Target Set Coefficient Details

**Test Procedure Dynamometer Coefficients Category :** C-H-E
**Target CoefficientA Value :** 47.9
**Target CoefficientB Value :** 1.468
**Target CoefficientC Value :** 0.0138
**Set CoefficientA Value :** 24.796
**Set CoefficientB Value :** 0.71020
**Set CoefficientC Value :** 0.020722

**Manufacturer Comment Text :** CON 265/40 R21

### EPA Generated Test Vehicle Details

**Original Receipt Date :** 20140624
**Hybrid Vehicle Indicator :** N
**Adjusted Loaded Vehicle Weight Value :** 0
**Loaded Vehicle Weight Value :** 5462
**Total Road Load Horsepower Value :** 20.8

### Transaction Status Details

Verify Processing Report

**Transaction Status Identifier :** ACCEPTED

## S-07: Test Results

Link to CSI

| | Designation | EVAP Family | Date |
|---|---|---|---|
| 1 | Certification Summary Information Report | N/A | 07/17/2014 |

## S-08: Statements

Please refer to the common application for certification.

## S-09: OBD-System Information

The OBD approval is listed in specific section 14.

## S-10: Alternate Fuel (if applicable)

This test group does not cover flexible or dedicated alternate fuel vehicles.

## S-11: List of AECD

Please refer to S-16 for a detailed description of AECDs including functional explanations.
AECD located at the end of document

Link to AECD

## S-12: Identification and Description of certified vehicles

The identification and description of all vehicles covered by the certificate is given
- in section 02 (common) for exhaust purposes
- in section 03 (common) for evaporative/refueling families

All appropriate test parameters necessary to conduct an official certification exhaust or evaporative emission test are provided in sections 07 or 17.

## S-13: Projected US vehicle sales

Please refer to the common application for certification.

# S-14: Request for Certificate

S-14-01: Request for Certificate

Mercedes-Benz requests that EPA issues a certificate of conformity and that ARB issues an executive order for the test group listed on the cover page of this application.

The applicable test results are listed in section 07. The test group complies with all applicable regulations contained within 40 CFR Part 86. The application is current as of this date.

Markus Loesch

Note: Compliance statements are listed in the common section 08.

S-14-02: OBD approval

For OBD approval see confidential section (S-16)

S-14-03: Fee filing form

EPA Form 3520-29 OMB Control No. 2060-0545

EPA

U.S. Environmental Protection Agency
Motor Vehicle and Engine Compliance Program
**On-Highway Fee Filing Form**
For Certification Applications Received In Calendar Year 2014

Manufacturer Name Mercedes-Benz USA, LLC

Address One Mercedes Drive

City/State/Zip Code/Country Montvale, NJ 07645

On-Highway Certification Request Type (check one)

- [x] LDV/LDT/MDPV/HDV (Chassis cert) FEDERAL ($28,528)
- [ ] LDV/LDT/MDPV/HDV (Chassis cert) CAL-ONLY ($15,077)
- [ ] HDE (Engine Dyno cert) FEDERAL ($38,464)
- [ ] HDV EVAP-ONLY ($563)
- [ ] HDE CALIF-ONLY ($563)
- [ ] MOTORCYCLE ($1,717)
- [ ] LD/MDPV/HDV ICI ($88,591)

EPA standard family or test group: F M B X T 0 2 . 1 U 2 A

Amount paid (U.S. Funds Only): $ 28,528.00

Enter the check number, or the statement "WIRE" or "ACH": WIRE

**Reduced Fee Section** (40 CFR §1027.120)

**Reduced fee calculation (minimum initial payment $750): Total number of vehicles/units covered:___**
**Aggregate retail sales price of the vehicles/units: $ _____ x 1% = $ _____**
**Check box if an Independent Commercial Importer: [ ] List the VIN of imported vehicles/engines below:**

Company Representative: R-Thomas Brunner Signature

Title: Dept. Manager, VCA Phone/Fax: 201.573.2622 / Date: 04 / 21 / 2014

**E-mail Address:** r-thomas.brunner@mbusa.com

**Submission of payments and forms:**

(1) Online: **Forms** may be found and submitted with or without **payments** online at www.Pay.gov.
(2) By mail: For check payments only, send **checks** and this **form** to:

**Environmental Protection Agency**
**Motor Vehicle and Engine Compliance Program**
**P.O. Box 979032**
**St. Louis, MO 63197-9000**

(3) Transmit offline Wire **payments** to the New York Federal Reserve Bank.(See Instructions, p.2)
(4) Transmit offline ACH **payments** to the Federal Reserve Bank of Cleveland. (Instructions, p.2)
(5) **Forms** not submitted under (1) and (2) above can be sent as email attachments to Fees@epa.gov.
Forms and payments sent in ways other than the above may be delayed or ineffective. See the Instructions for sending checks and forms by private mail service (e.g., Federal Express).

The public reporting and recordkeeping burden for this collection of information is estimated to average 18 minutes per response. Send comments on EPA's need for this information, the accuracy of the provided burden estimate, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques, to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., N.W., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed Form 3520-29 to this address.

**This form expires: 10/31/2016**

S-14-04: Approval Letters low ash oil

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NATIONAL VEHICLE AND FUEL EMISSIONS LABORATORY
2565 PLYMOUTH ROAD
ANN ARBOR, MICHIGAN 48105-2498

OFFICE OF
AIR AND RADIATION

September 27, 2005

RECEIVED
OCT 07 2005
R. R. MODLIN

Mr. Reginald Modlin
Director, Environmental and Energy Planning
DaimlerChrysler Corporation
800 Chrysler Drive
Auburn Hills, MI 48326-2757
CIMS 482-00-71

Mr. Modlin,

Thank you for your August 30, 2005 letter regarding DaimlerChrysler's desire to use low ash content engine oil to certify your clean light-duty diesel vehicles. As you correctly noted in your letter, EPA Guidance Documents CCD-01-12 (Use of GF-3 Engine Oil in Test Vehicles) and CCD-04-07 (Use of GF-4 Engine Oil in Certification and Fuel Economy Test Vehicles) are the basis for how EPA determines how to deal with unique engine oils with respect to certification and fuel economy testing.

EPA agrees that the use of low ash content engine oil (0.8%) will be beneficial to allowing new advanced particulate filter systems to meet their full potential for performing over the full useful life of the vehicles. Our primary concern with manufacturer's request to certify with unique engine oils is that these oils be readily available to consumers. We realize that the number of light-duty diesel vehicles in the U.S. is low and that the demand for clean light-duty diesel engine oil is also low and that it will be initially difficult to establish widespread distribution of low ash oil.

The plan proposed by DaimlerChrysler for the use and certification of low ash content engine oil, which includes the availability of the low ash engine oil at the 4,300 DaimlerChrysler dealerships in the U.S., the investigation of the potential for making the engine oil available through automotive aftermarket retail chains (Auto Zone, NAPA, etc.) through DaimlerChrysler's MOPAR aftermarket organization, and the continued work with oil manufacturers to market the oil through their outlets and promote the use of the oil at "quick oil change" facilities, appears to be reasonable. Therefore, we are approving DaimlerChrylser's plan to use low ash content engine oil for the certification of light-duty diesel vehicles.

Printed on Recycled Paper

Please let me know if you any additional questions. You can contact me at 734-214-4286.

Sincerely,

Linc Wehrly
Compliance and Innovative Strategies Division
Office of Transportation and Air Quality

## S-15: HEV-specific data (if applicable)

No Hybrid Electric Vehicles (HEV) are part of this test group.

## Included Attachments

1. Certification Summary Information Report (CSI)
2. Auxiliary Emission Control Devices (AECD)

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Manufacturer** | Mercedes Benz | **Manufacturer Code** | MBX |
| **Test Group** | FMBXT02.1U2A | **Evaporative/Refueling Family** | N/A |
| **Certificate Number** | N/A | **CARB Executive Order #** | N/A |
| **Certificate Issue Date** | N/A | **Certificate Revision Date** | N/A |
| **Certificate Effective Date** | N/A | **Conditional Certificate** | -- |
| **CSI Revision #** | N/A | **CSI Submission/Revision Date** | 07/17/2014 |
| **Model Year** | 2015 | | |

## Test Group Information

| | | | |
|---|---|---|---|
| **CSI Type** | Update for Correction | **Running Change Reference Number** | N/A |
| **GHG Exempt Status** | Not Exempt | | |

## Drive Sources and Fuel(s)

## Drive Source #1: Combustion Engine

| Fuel | Basic Fuel Metering System | Lean Burn Strategy Indicator |
|---|---|---|
| Diesel | Common Rail Direct Diesel Injection | -- |

| | | | |
|---|---|---|---|
| **Hybrid Indicator** | No | | |
| **Multiple Fuel Storage** | -- | **Rechargeable Energy Storage System Indicator** | -- |
| **Multiple Fuel Combustion** | -- | **Off-board Charge Capable Indicator** | -- |
| **Fuel Cell Indicator** | -- | **EPA Vehicle Class** | LDT3 |
| **Federal Clean Fuel Vehicle** | No | **Federal Clean Fuel Vehicle Standard** | -- |
| **Federal Clean Fuel Vehicle ILEV** | -- | **California Partial Zero Emissions Vehicle Indicator** | -- |
| **Durability Group Name** | FMBXDPDNNPP4 | **Durability Group Equivalency Factor** | 1.0 |
| **Reduced Fee Test Group** | No | **Certification Region Code(s)** | FA, CA |
| **Complies with HD GHG 2b/3 regulations?** | No | | |
| **Introduction into Commerce Date** | -- | **CAP2000 Conditional Certificate?** | N/A |
| **Independent Commercial Importer?** | -- | **Alternative Fuel Converter Certificate?** | -- |
| **SFTP Compliance Indicator** | Yes | **SFTP Composite CO Option** | No |
| **OBD Compliance Type** | CARB | **OBD Demonstration Vehicle Test Group** | FMBXT02.1HD4 |
| **Mfr Test Group Comments** | -- | | |
| **Mfr Exhaust / Evap Standards Comments** | -- | | |

## Models Covered by this Certificate

| Carline Manufacturer | Division | Carline | Certification Region Code(s) | Drive System | Trans - Type | - # of Gears | Trans - Lockup |
|---|---|---|---|---|---|---|---|
| Mercedes Benz | 1 - Mercedes-Benz | 400 - ML 250 BLUETEC 4MATIC | Federal | 4-Wheel Drive | Automatic | 7 | Yes |
| Mercedes Benz | 1 - Mercedes-Benz | 400 - ML 250 BLUETEC 4MATIC | California + CAA Section 177 states | 4-Wheel Drive | Automatic | 7 | Yes |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | FMBXT02.1U2A | **Evaporative/Refueling Family** | N/A |

## Engine Description

| | | | |
|---|---|---|---|
| **Hybrid Type** | -- | **Hybrid Description** | -- |
| **Engine Type** | 4-Stroke Compression Ignition | **Mfr Engine Description** | -- |
| **Engine Block Arrangement** | Inline | **Mfr Engine Block Arrangement Description** | -- |
| **Camless Valvetrain Indicator** | No | **Oil Viscosity/Classification** | 5W-30 DC225-11 |
| **Number of Cylinders/Rotors** | 4 | | |

## After Treatment Device(s) (ATD)

| ATD Number | ATD Type | ATD Precious Metal | Substrate Material | Substrate Construction |
|---|---|---|---|---|
| 1 | Oxidation catalyst | Platinum + Paladium | Ceramic | Monolith |
| 2 | Diesel Particulate Filter | Platinum + Paladium | Ceramic | Monolith |
| 3 | Selective Catalytic Reduction | no precious metal / ferric oxide | Ceramic | Monolith |

| | |
|---|---|
| **Mfr After Treatment Device (ATD) Comments** | -- |
| **Direct Ozone Reduction (DOR) Device** | Not Equipped |
| **Mfr Emission Control Device Comments** | -- |

## Engine Configuration Number 1

| | | | |
|---|---|---|---|
| **Engine Displacement (liters)** | 2.1 | **Engine Rated Horsepower** | 201 |
| **Number of Inlet Valves Per Cylinder** | 2 | **Number of Exhaust Valves Per Cylinder** | 2 |
| **Air Aspiration Method** | Turbocharged | **Number of Air Aspiration Devices** | 1 |
| **Air Aspiration Device Configuration** | Single | **Charge Air Cooler Type** | Air |
| **Cylinder Deactivation Description** | N/A | | |
| **Variable Valve Timing System Description** | Allows timing of the intake/exhaust valves to be changed while the engin is in operation | **Variable Valve Lift System** | N/A |
| **Number of Knock Sensors** | 2 | | |
| **Air/Fuel Sensor # 1 Type** | Heated oxygen | **Air/Fuel Sensor # 1 Description** | N/A |
| **Mfr Air/Fuel Sensor Comments** | -- | | |
| **Exhaust Gas Recirculation** | Yes | **EGR Type** | Variable Valve Timing Control |
| **Cooled Exhaust Gas Recirculation** | Yes | | |
| **Closed Loop Air Injection System** | Yes | **Air Injection Type** | -- |
| **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 |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel | FMBX10032201 | FMBX10032207 | FMBX10032206 | FMBX10032243 | FMBX10032273 | 21.1 | 21.1 | 26.8 | 26.3 | N/A |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | FMBXT02.1U2A | **Evaporative/Refueling Family** | N/A |

## Emission Data Vehicle Information

**Vehicle ID / Configuration** W166DE22TC-Z4011 / 0

## Vehicle Model

| | | | |
|---|---|---|---|
| **Represented Test Vehicle Make** | Mercedes-Benz | **Represented Test Vehicle Model** | ML 250 BlueTEC 4MATIC |

## Drive Sources and Fuel System Details

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

| | | | |
|---|---|---|---|
| **Hybrid Indicator** | N | | |
| **Multiple Fuel Storage** | -- | **Multiple Fuel Combustion** | -- |
| **Fuel Cell Indicator** | -- | **Rechargeable Energy Storage System Indicator** | -- |
| **Rechargeable Energy Storage System** | -- | **Rechargeable Energy Storage System, if 'Other'** | -- |
| **Off-board charge Capable Indicator** | -- | | |
| **Transmission Type** | Automatic | **# of Transmission Gears** | 7 |
| **Engine Code** | OM651-22 | **Axle Ratio** | 3.27 |
| **Displacement (liters)** | 2.143 | **Rated Horsepower** | 201 |
| **Equivalent Test Weight (pounds)** | 5500 | **Air Aspiration Method** | Turbocharged |
| **Drive Mode While Testing** | 2-Wheel Drive, Rear | **SIL Usage** | Not eqipped |
| **Aged Emission Components** | 4,000 (mi) | | |

## Dynamometer Coefficients:

| | Target Coefficients | | | Set Coefficients | | | |
|---|---|---|---|---|---|---|---|
| **Coefficient Category** | **A (lbf)** | **B (lbf/mph)** | **C (lbf/mph**2)** | **A (lbf)** | **B (lbf/mph)** | **C (lbf/mph**2)** | **EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients** |
| **City/Highway/Evap** | 47.9 | 1.468 | 0.0138 | 24.796 | 0.7102 | 0.020722 | 20.8 |
| **Cold CO** | 53.22 | 1.63155 | 0.015313 | 25.673 | 0.55391 | 0.025287 | N/A |
| **US06** | 47.9 | 1.468 | 0.0138 | 24.796 | 0.7102 | 0.020722 | N/A |

**Manufacturer Test Vehicle Comments** CON 265/40 R21

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | FMBXT02.1U2A | **Evaporative/Refueling Family** | N/A |
| **Test #** | **FMBX10032201** | **Test Procedure** | **2 - CVS 75 and later (w/o can. load)** |
| **Exhaust Test # for this Evap Test** | N/A | **Test Fuel Type** | 19 - Federal Cert Diesel 7-15 PPM Sulfur |
| **Test Date** | 05/23/2014 | **Fuel** | Diesel |
| **Vehicle Class** | LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000) | **DF Type** | Mfr. Determined |
| **Verify Test Lab ID** | Ann Arbor Technology Center | | |

## Test Results

| Test Result Name | Unrounded Test Result | Verify Calculated FE MPG Equivalent Value |
|---|---|---|
| Bag 1 Carbon Dioxide | 424.39 | -- |
| Bag 1 Fuel Economy | 23.9 | 23.9 |
| Bag 2 Carbon Dioxide | 352.26 | -- |
| Bag 2 Fuel Economy | 28.9 | 28.9 |
| Bag 3 Carbon Dioxide | 342.38 | -- |
| Bag 3 Fuel Economy | 29.7 | 29.7 |
| CH4 - Methane | 0.01646 | -- |
| Carbon Monoxide | 0.1162 | -- |
| Drive Trace Absolute Speed Change Rating | -0.48 | -- |
| Drive Trace Energy Economy Rating | -0.82 | -- |
| Drive Trace Inertia Work Ratio Rating | -0.88 | -- |
| Formaldehyde | 0.000261 | -- |
| Manufacturer Fuel Economy | 27.9 | 27.9 |
| Nitrogen Oxide | 0.0393 | -- |
| Nitrous Oxide | 0.01 | -- |
| Non-methane Hydrocarbon | 0.0145 | -- |
| Non-methane organic gas (California) | 0.0145 | -- |
| Particulate Matter | 0.0016 | -- |
| Total Hydrocarbon | 0.03 | -- |

| Test Result Name | Unrounded Test Result | Verify Calculated CREE/OPT-CREE |
|---|---|---|
| Carbon-Related Exhaust Emissions | 365 | 364 |

| Test Result Name | Unrounded Test Result | Verify Calculated CO2 |
|---|---|---|
| Carbon dioxide | 364.49 | -- |

**Manufacturer Test Comments** CON 265/40 R21 Note: Optional use of alternative N2O and CH4 --> 86-1818-12 (f) (3) FEL N20 = 0.045 g/mi (data entered in Verify TG sheet 0.0136) Added NMOG

# Certification Summary Information Report

| Test Group | FMBXT02.1U2A | Evaporative/Refueling Family | N/A |
|---|---|---|---|

| Certification Region | Useful Life | Standard Level | Emission Name | Rounded Result | RAF | NMOG/NMHC Ratio | Diesel Adjustment Factor | Add DF | Mult DF | Certification Level | Standard | Pass/Fail |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fed | 50,000 miles | Federal Tier 2 Bin 5 | CO | 0.12 | -- | -- | 0.0036 UP | 0.01 | -- | 0.1 | 3.4 | Pass |
| Fed | 50,000 miles | Federal Tier 2 Bin 5 | HCHO | 0.0003 | -- | -- | 0.000 UP | 0.000 | -- | 0.000 | 0.015 | Pass |
| Fed | 50,000 miles | Federal Tier 2 Bin 5 | NMOG | 0.0145 | -- | 1.00 | 0.0006 UP | 0.0006 | -- | 0.016 | 0.075 | Pass |
| Fed | 50,000 miles | Federal Tier 2 Bin 5 | NOX | 0.039 | -- | -- | 0.0024 UP | 0.002 | -- | 0.04 | 0.05 | Pass |
| Fed | 50,000 miles | Federal Tier 2 Bin 5 | PM | 0.002 | -- | -- | 0.0002 UP | 0.00 | -- | 0.00 | 0.01 | Pass |
| Fed | 120,000 miles | Federal Tier 2 Bin 5 | CO | 0.12 | -- | -- | 0.0036 UP | 0.03 | -- | 0.2 | 4.2 | Pass |
| Fed | 120,000 miles | Federal Tier 2 Bin 5 | CREE | 364 | -- | -- | 0 UP | 0.0522 | -- | 364 | -- | -- |
| Fed | 120,000 miles | Federal Tier 2 Bin 5 | HC-NM+NOX-COMP | 0.109 | -- | -- | 0.0031 UP | 0.0066 | -- | 0.11 | 0.99 | Pass |
| Fed | 120,000 miles | Federal Tier 2 Bin 5 | HCHO | 0.0003 | -- | -- | 0.000 UP | 0.000 | -- | 0.000 | 0.018 | Pass |
| Fed | 120,000 miles | Federal Tier 2 Bin 5 | NMOG | 0.0145 | -- | 1.00 | 0.0006 UP | 0.0016 | -- | 0.017 | 0.090 | Pass |
| Fed | 120,000 miles | Federal Tier 2 Bin 5 | NOX | 0.039 | -- | -- | 0.0024 UP | 0.005 | -- | 0.05 | 0.07 | Pass |
| Fed | 120,000 miles | Federal Tier 2 Bin 5 | PM | 0.002 | -- | -- | 0.0002 UP | 0.00 | -- | 0.00 | 0.01 | Pass |
| CA | 50,000 miles | California LEV-II ULEV | CO | 0.12 | -- | -- | 0.0036 UP | 0.01 | -- | 0.1 | 3.4 | Pass |
| CA | 50,000 miles | California LEV-II ULEV | HCHO | 0.0003 | -- | -- | 0.0000 UP | 0.0000 | -- | 0.000 | 0.015 | Pass |
| CA | 50,000 miles | California LEV-II ULEV | NMOG | 0.0145 | -- | 1.00 | 0.0006 UP | 0.0006 | -- | 0.016 | 0.075 | Pass |
| CA | 50,000 miles | California LEV-II ULEV | NOX | 0.039 | -- | -- | 0.0024 UP | 0.002 | -- | 0.04 | 0.05 | Pass |
| CA | 50,000 miles | California LEV-II ULEV | PM | 0.002 | -- | -- | 0.0002 UP | 0.00 | -- | 0.00 | 0.01 | Pass |
| CA | 120,000 miles | California LEV-II ULEV | CO | 0.12 | -- | -- | 0.0036 UP | 0.03 | -- | 0.2 | 4.2 | Pass |
| CA | 120,000 miles | California LEV-II ULEV | CREE | 364 | -- | -- | 0 UP | 0.0522 | -- | 364 | -- | -- |
| CA | 120,000 miles | California LEV-II ULEV | HC-NM+NOX-COMP | 0.109 | -- | -- | 0.0031 UP | 0.0066 | -- | 0.11 | 0.99 | Pass |
| CA | 120,000 miles | California LEV-II ULEV | HCHO | 0.0003 | -- | -- | 0.0000 UP | 0.0000 | -- | 0.000 | 0.018 | Pass |
| CA | 120,000 miles | California LEV-II ULEV | NMOG | 0.0145 | -- | 1.00 | 0.0006 UP | 0.0016 | -- | 0.017 | 0.090 | Pass |

# Certification Summary Information Report

| Test Group | FMBXT02.1U2A | Evaporative/Refueling Family | N/A |
|---|---|---|---|

| Certification Region | Useful Life | Standard Level | Emission Name | Rounded Result | RAF | NMOG/NMHC Ratio | Diesel Adjustment Factor | Add DF | Mult DF | Certification Level | Standard | Pass/Fail |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CA | 120,000 miles | California LEV-II ULEV | NOX | 0.0 | -- | -- | 0.0024 UP | 0.002 | -- | 0 | 007 | Pass |
| CA | 120,000 miles | California LEV-II ULEV | PM | 0.002 | -- | -- | 0.0002 UP | 0.00 | -- | 0.00 | 0.01 | Pass |

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

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | FMBXT02.1U2A | **Evaporative/Refueling Family** | N/A |

| | | | |
|---|---|---|---|
| **Test #** | **FMBX10032243** | **Test Procedure** | **11 - Cold CO** |
| **Exhaust Test # for this Evap Test** | N/A | **Test Fuel Type** | 19 - Federal Cert Diesel 7-15 PPM Sulfur |
| **Test Date** | 05/19/2014 | **Fuel** | Diesel |
| **Vehicle Class** | LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000) | **DF Type** | Mfr. Determined |
| **Verify Test Lab ID** | Ann Arbor Technology Center | | |

## Test Results

| Test Result Name | Unrounded Test Result | Verify Calculated FE MPG Equivalent Value |
|---|---|---|
| **Bag 1 Carbon Dioxide** | 582.98 | -- |
| **Bag 1 Fuel Economy** | 17.4 | 17.4 |
| **Bag 2 Carbon Dioxide** | 490.51 | -- |
| **Bag 2 Fuel Economy** | 20.7 | 20.7 |
| **Bag 3 Carbon Dioxide** | 398.88 | -- |
| **Bag 3 Fuel Economy** | 25.5 | 25.5 |
| **Carbon Monoxide** | 0.1912 | -- |
| **Drive Trace Absolute Speed Change Rating** | -0.23 | -- |
| **Drive Trace Energy Economy Rating** | -0.47 | -- |
| **Drive Trace Inertia Work Ratio Rating** | -0.57 | -- |
| **Manufacturer Fuel Economy** | 21 | 21 |
| **Non-methane Hydrocarbon** | 0.008 | -- |
| **Particulate Matter** | 0.0087 | -- |
| **Total Hydrocarbon** | 0.014 | -- |

| Test Result Name | Unrounded Test Result | Verify Calculated CO2 |
|---|---|---|
| **Carbon dioxide** | 484.54 | -- |

**Manufacturer Test Comments** CONTINENTAL 265/40 R21

| Certification Region | Useful Life | Standard Level | Emission Name | Rounded Result | RAF | NMOG/NM HC Ratio | Diesel Adjustment Factor | Add DF | Mult DF | Certification Level | Standard | Pass/Fail |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fed | 50,000 miles | Federal Tier 2 Bin 5 | CO | 0.19 | -- | -- | 0.0036 UP | 0.01 | -- | 0.2 | 12.5 | Pass |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | FMBXT02.1U2A | **Evaporative/Refueling Family** | N/A |

| | | | |
|---|---|---|---|
| **Test #** | **FMBX10032273** | **Test Procedure** | **3 - HWFE** |
| **Exhaust Test # for this Evap Test** | N/A | **Test Fuel Type** | 19 - Federal Cert Diesel 7-15 PPM Sulfur |
| **Test Date** | 05/23/2014 | **Fuel** | Diesel |
| **Vehicle Class** | LDT2 (LVW 3751-5750, GVW 0-6000), LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000) | **DF Type** | Mfr. Determined |
| **Verify Test Lab ID** | Ann Arbor Technology Center | | |

## Test Results

| Test Result Name | Unrounded Test Result | Verify Calculated FE MPG Equivalent Value |
|---|---|---|
| **CH4 - Methane** | 0.00097 | -- |
| **Carbon Monoxide** | 0.0044 | -- |
| **Drive Trace Absolute Speed Change Rating** | -2.05 | -- |
| **Drive Trace Energy Economy Rating** | -0.45 | -- |
| **Drive Trace Inertia Work Ratio Rating** | -2 | -- |
| **Manufacturer Fuel Economy** | 38.8 | 38.8 |
| **Nitrogen Oxide** | 0.0015 | -- |
| **Non-methane Hydrocarbon** | 0 | -- |
| **Particulate Matter** | 0.002 | -- |
| **Total Hydrocarbon** | 0.001 | -- |

| Test Result Name | Unrounded Test Result | Verify Calculated CREE/OPT-CREE |
|---|---|---|
| **Carbon-Related Exhaust Emissions** | 262 | 262 |

| Test Result Name | Unrounded Test Result | Verify Calculated CO2 |
|---|---|---|
| **Carbon dioxide** | 261.93 | -- |

**Manufacturer Test Comments** CON 265/40 R21 Note: Optional use of alternative N2O and CH4 --> 86-1818-12 (f) (3) FEL N20 = 0.045 g/mi (data entered in Verify TG sheet 0.0022)

# Certification Summary Information Report

| Test Group | FMBXT02.1U2A | Evaporative/Refueling Family | N/A |
|---|---|---|---|

| Certification Region | Useful Life | Standard Level | Emission Name | Rounded Result | RAF | NMOG/NMHC Ratio | Diesel Adjustment Factor | Add DF | Mult DF | Certification Level | Standard | Pass/Fail |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fed | 50,000 miles | Federal Tier 2 Bin 5 | NOX | 0.002 | -- | -- | 0.0024 UP | 0.002 | -- | 0.01 | 0.07 | Pass |
| Fed | 120,000 miles | Federal Tier 2 Bin 5 | CREE | 262 | -- | -- | 0 UP | 0.0522 | -- | 262 | -- | -- |
| Fed | 120,000 miles | Federal Tier 2 Bin 5 | NOX | 0.002 | -- | -- | 0.0024 UP | 0.005 | -- | 0.01 | 0.09 | Pass |
| CA | 50,000 miles | California LEV-II LEV | NOX | 0.002 | -- | -- | 0.0024 UP | 0.002 | -- | 0.01 | 0.07 | Pass |
| CA | 120,000 miles | California LEV-II LEV | CREE | 262 | -- | -- | 0 UP | 0.0522 | -- | 262 | -- | -- |
| CA | 120,000 miles | California LEV-II LEV | NOX | 0.002 | -- | -- | 0.0024 UP | 0.005 | -- | 0.01 | 0.09 | Pass |

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

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | FMBXT02.1U2A | **Evaporative/Refueling Family** | N/A |

| | | | |
|---|---|---|---|
| **Test #** | **FMBX10032207** | **Test Procedure** | **90 - US06** |
| **Exhaust Test # for this Evap Test** | N/A | **Test Fuel Type** | 19 - Federal Cert Diesel 7-15 PPM Sulfur |
| **Test Date** | 05/23/2014 | **Fuel** | Diesel |
| **Vehicle Class** | LDT2 (LVW 3751-5750, GVW 0-6000), LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000) | **DF Type** | Mfr. Determined |
| **Verify Test Lab ID** | Ann Arbor Technology Center | | |

## Test Results

| Test Result Name | Unrounded Test Result | Verify Calculated FE MPG Equivalent Value |
|---|---|---|
| Bag 1 Carbon Dioxide | 618.08 | -- |
| Bag 1 Fuel Economy | 16.5 | 16.5 |
| Bag 2 Carbon Dioxide | 352.38 | -- |
| Bag 2 Fuel Economy | 28.9 | 28.9 |
| Carbon Monoxide | 0.0054 | -- |
| Drive Trace Absolute Speed Change Rating | -0.43 | -- |
| Drive Trace Energy Economy Rating | -0.85 | -- |
| Drive Trace Inertia Work Ratio Rating | -0.69 | -- |
| Manufacturer Fuel Economy | 24.7 | 24.7 |
| Nitrogen Oxide | 0.20656 | -- |
| Non-methane Hydrocarbon | 0.0005 | -- |
| Particulate Matter | 0.0078 | -- |
| SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03 | 0.20706 | -- |
| Total Hydrocarbon | 0.001 | -- |

| Test Result Name | Unrounded Test Result | Verify Calculated CO2 |
|---|---|---|
| Carbon dioxide | 411.32 | -- |

**Manufacturer Test Comments** CONTINENTAL 265/40 R21

# Certification Summary Information Report

| Test Group | FMBXT02.1U2A | Evaporative/Refueling Family | N/A |
|---|---|---|---|

| Certification Region | Useful Life | Standard Level | Emission Name | Rounded Result | RAF | NMOG/NM HC Ratio | Diesel Adjustment Factor | Add DF | Mult DF | Certification Level | Standard | Pass/Fail |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fed | 4,000 miles | Federal Tier 2 Bin 5 | CO | 0.01 | -- | -- | 0.0036 UP | -- | -- | 0.0 | 10.5 | Pass |
| Fed | 4,000 miles | Federal Tier 2 Bin 5 | HC-NM+NOX | 0.21 | -- | -- | 0.0031 UP | -- | -- | 0.2 | 0.4 | Pass |
| Fed | 120,000 miles | Federal Tier 2 Bin 5 | CO | 0.01 | -- | -- | 0.0036 UP | 0.03 | -- | 0.0 | 16.9 | Pass |
| CA | 4,000 miles | California LEV-II LEV | CO | 0.01 | -- | -- | 0.0036 UP | -- | -- | 0.0 | 10.5 | Pass |
| CA | 4,000 miles | California LEV-II LEV | HC-NM+NOX | 0.207 | -- | -- | 0.0031 UP | -- | -- | 0.21 | 0.40 | Pass |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | FMBXT02.1U2A | **Evaporative/Refueling Family** | N/A |
| **Test #** | **FMBX10032206** | **Test Procedure** | **95 - SC03** |
| **Exhaust Test # for this Evap Test** | N/A | **Test Fuel Type** | 19 - Federal Cert Diesel 7-15 PPM Sulfur |
| **Test Date** | 05/23/2014 | **Fuel** | Diesel |
| **Vehicle Class** | LDT2 (LVW 3751-5750, GVW 0-6000), LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000) | **DF Type** | Mfr. Determined |
| **Verify Test Lab ID** | Ann Arbor Technology Center | | |

## Test Results

| Test Result Name | Unrounded Test Result | Verify Calculated FE MPG Equivalent Value |
|---|---|---|
| Carbon Monoxide | 0 | -- |
| Drive Trace Absolute Speed Change Rating | -0.74 | -- |
| Drive Trace Energy Economy Rating | -0.27 | -- |
| Drive Trace Inertia Work Ratio Rating | -1.64 | -- |
| Manufacturer Fuel Economy | 22.1 | 22.1 |
| Nitrogen Oxide | 0.07567 | -- |
| Non-methane Hydrocarbon | 0.00083 | -- |
| Particulate Matter | 0.0023 | -- |
| SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03 | 0.0765 | -- |
| Total Hydrocarbon | 0.005 | -- |

| Test Result Name | Unrounded Test Result | Verify Calculated CO2 |
|---|---|---|
| Carbon dioxide | 460.92 | -- |

**Manufacturer Test Comments** CONTINENTAL 265/40 R21

| Certification Region | Useful Life | Standard Level | Emission Name | Rounded Result | RAF | NMOG/NM HC Ratio | Diesel Adjustment Factor | Add DF | Mult DF | Certification Level | Standard | Pass/Fail |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fed | 4,000 miles | Federal Tier 2 Bin 5 | CO | 0.00 | -- | -- | 0.0036 UP | -- | -- | 0.0 | 3.5 | Pass |
| Fed | 4,000 miles | Federal Tier 2 Bin 5 | HC-NM+NOX | 0.076 | -- | -- | 0.0031 UP | -- | -- | 0.08 | 0.31 | Pass |
| Fed | 120,000 miles | Federal Tier 2 Bin 5 | CO | 0.00 | -- | -- | 0.0036 UP | 0.03 | -- | 0.0 | 5.6 | Pass |
| CA | 4,000 miles | California LEV-II LEV | CO | 0.00 | -- | -- | 0.0036 UP | -- | -- | 0.0 | 3.5 | Pass |
| CA | 4,000 miles | California LEV-II LEV | HC-NM+NOX | 0.076 | -- | -- | 0.0031 UP | -- | -- | 0.08 | 0.31 | Pass |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | FMBXT02.1U2A | **Evaporative/Refueling Family** | N/A |

## Consolidated List of Standards

### Exhaust Standards

| | | | |
|---|---|---|---|
| **Cert Region** | California + CAA Section 177 states | **Cert/In-Use Code** | Both |
| **Vehicle Class** | LDT2 (LVW 3751-5750, GVW 0-6000) | **Standard Level** | California LEV-II LEV |
| **Fuel** | Diesel | **Test Procedure** | HWFE |

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 50,000 miles | NOX | -- | -- | -- | 0.0024 | 0 | -- | 0.002 | 0.07 |
| 120,000 miles | CREE | -- | -- | -- | 0 | 0 | -- | 0.0522 | 999 |
| 120,000 miles | N2O | -- | -- | -- | 0 | 0 | -- | -- | 0.045 |
| 120,000 miles | NOX | -- | -- | -- | 0.0024 | 0 | -- | 0.005 | 0.09 |

| | | | |
|---|---|---|---|
| **Cert Region** | Federal | **Cert/In-Use Code** | Both |
| **Vehicle Class** | LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000) | **Standard Level** | Federal Tier 2 Bin 5 |
| **Fuel** | Diesel | **Test Procedure** | US06 |

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 4,000 miles | CO | -- | -- | -- | 0.0036 | 0 | -- | -- | 10.5 |
| 4,000 miles | HC-NM+NOX | -- | -- | -- | 0.0031 | 0 | -- | -- | 0.4 |
| 120,000 miles | CO | -- | -- | -- | 0.0036 | 0 | -- | 0.03 | 16.9 |

| | | | |
|---|---|---|---|
| **Cert Region** | Federal | **Cert/In-Use Code** | Both |
| **Vehicle Class** | LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000) | **Standard Level** | Federal Tier 2 Bin 5 |
| **Fuel** | Diesel | **Test Procedure** | Cold CO |

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 50,000 miles | CO | -- | -- | -- | 0.0036 | 0 | -- | 0.01 | 12.5 |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | FMBXT02.1U2A | **Evaporative/Refueling Family** | N/A |

| | | | |
|---|---|---|---|
| **Cert Region** | California + CAA Section 177 states | **Cert/In-Use Code** | Both |
| **Vehicle Class** | LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000) | **Standard Level** | California LEV-II ULEV |
| **Fuel** | Diesel | **Test Procedure** | CVS 75 and later (w/o can. load) |

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 50,000 miles | CO | -- | -- | -- | 0.0036 | 0 | -- | 0.01 | 3.4 |
| 50,000 miles | HCHO | -- | -- | -- | 0.0000 | 0 | -- | 0.0000 | 0.015 |
| 50,000 miles | NMOG | -- | -- | 1.00 | 0.0006 | 0 | -- | 0.0006 | 0.075 |
| 50,000 miles | NOX | -- | -- | -- | 0.0024 | 0 | -- | 0.002 | 0.05 |
| 50,000 miles | PM | -- | -- | -- | 0.0002 | 0 | -- | 0.00 | 0.01 |
| 120,000 miles | CO | -- | -- | -- | 0.0036 | 0 | -- | 0.03 | 4.2 |
| 120,000 miles | CREE | -- | -- | -- | 0 | 0 | -- | 0.0522 | 999 |
| 120,000 miles | HC-NM+NOX-COMP | -- | -- | -- | 0.0031 | 0 | -- | 0.0066 | 0.99 |
| 120,000 miles | HCHO | -- | -- | -- | 0.0000 | 0 | -- | 0.0000 | 0.018 |
| 120,000 miles | METHANE | -- | -- | -- | 0 | 0 | -- | -- | 0.030 |
| 120,000 miles | N2O | -- | -- | -- | 0 | 0 | -- | -- | 0.045 |
| 120,000 miles | NMOG | -- | -- | 1.00 | 0.0006 | 0 | -- | 0.0016 | 0.090 |
| 120,000 miles | NOX | -- | -- | -- | 0.0024 | 0 | -- | 0.002 | 007 |
| 120,000 miles | PM | -- | -- | -- | 0.0002 | 0 | -- | 0.00 | 0.01 |

| | | | |
|---|---|---|---|
| **Cert Region** | Federal | **Cert/In-Use Code** | Both |
| **Vehicle Class** | LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000) | **Standard Level** | Federal Tier 2 Bin 5 |
| **Fuel** | Diesel | **Test Procedure** | HWFE |

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 50,000 miles | NOX | -- | -- | -- | 0.0024 | 0 | -- | 0.002 | 0.07 |
| 120,000 miles | CREE | -- | -- | -- | 0 | 0 | -- | 0.0522 | 999 |
| 120,000 miles | N2O | -- | -- | -- | 0 | 0 | -- | -- | 0.045 |
| 120,000 miles | NOX | -- | -- | -- | 0.0024 | 0 | -- | 0.005 | 0.09 |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | FMBXT02.1U2A | **Evaporative/Refueling Family** | N/A |

| | | | |
|---|---|---|---|
| **Cert Region** | Federal | **Cert/In-Use Code** | Both |
| **Vehicle Class** | LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000) | **Standard Level** | Federal Tier 2 Bin 5 |
| **Fuel** | Diesel | **Test Procedure** | CVS 75 and later (w/o can. load) |

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 50,000 miles | CO | -- | -- | -- | 0.0036 | 0 | -- | 0.01 | 3.4 |
| 50,000 miles | HCHO | -- | -- | -- | 0.000 | 0 | -- | 0.000 | 0.015 |
| 50,000 miles | NMOG | -- | -- | 1.00 | 0.0006 | 0 | -- | 0.0006 | 0.075 |
| 50,000 miles | NOX | -- | -- | -- | 0.0024 | 0 | -- | 0.002 | 0.05 |
| 50,000 miles | PM | -- | -- | -- | 0.0002 | 0 | -- | 0.00 | 0.01 |
| 120,000 miles | CO | -- | -- | -- | 0.0036 | 0 | -- | 0.03 | 4.2 |
| 120,000 miles | CREE | -- | -- | -- | 0 | 0 | -- | 0.0522 | 999 |
| 120,000 miles | HC-NM+NOX-COMP | -- | -- | -- | 0.0031 | 0 | -- | 0.0066 | 0.99 |
| 120,000 miles | HCHO | -- | -- | -- | 0.000 | 0 | -- | 0.000 | 0.018 |
| 120,000 miles | METHANE | -- | -- | -- | 0 | 0 | -- | -- | 0.030 |
| 120,000 miles | N2O | -- | -- | -- | 0 | 0 | -- | -- | 0.045 |
| 120,000 miles | NMOG | -- | -- | 1.00 | 0.0006 | 0 | -- | 0.0016 | 0.090 |
| 120,000 miles | NOX | -- | -- | -- | 0.0024 | 0 | -- | 0.005 | 0.07 |
| 120,000 miles | PM | -- | -- | -- | 0.0002 | 0 | -- | 0.00 | 0.01 |

| | | | |
|---|---|---|---|
| **Cert Region** | Federal | **Cert/In-Use Code** | Both |
| **Vehicle Class** | LDT3 (ALVW 3751-5750, LVW 0-3750, GVW > 6000) | **Standard Level** | Federal Tier 2 Bin 5 |
| **Fuel** | Diesel | **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 |
|---|---|---|---|---|---|---|---|---|---|
| 4,000 miles | CO | -- | -- | -- | 0.0036 | 0 | -- | -- | 3.5 |
| 4,000 miles | HC-NM+NOX | -- | -- | -- | 0.0031 | 0 | -- | -- | 0.31 |
| 120,000 miles | CO | -- | -- | -- | 0.0036 | 0 | -- | 0.03 | 5.6 |

# Certification Summary Information Report

| | | | |
|---|---|---|---|
| **Test Group** | FMBXT02.1U2A | **Evaporative/Refueling Family** | N/A |

| | | | |
|---|---|---|---|
| **Cert Region** | California + CAA Section 177 states | **Cert/In-Use Code** | Both |
| **Vehicle Class** | LDT2 (LVW 3751-5750, GVW 0-6000) | **Standard Level** | California LEV-II LEV |
| **Fuel** | Diesel | **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 |
|---|---|---|---|---|---|---|---|---|---|
| 4,000 miles | CO | -- | -- | -- | 0.0036 | 0 | -- | -- | 3.5 |
| 4,000 miles | HC-NM+NOX | -- | -- | -- | 0.0031 | 0 | -- | -- | 0.31 |

| | | | |
|---|---|---|---|
| **Cert Region** | California + CAA Section 177 states | **Cert/In-Use Code** | Both |
| **Vehicle Class** | LDT2 (LVW 3751-5750, GVW 0-6000) | **Standard Level** | California LEV-II LEV |
| **Fuel** | Diesel | **Test Procedure** | US06 |

| Useful Life | Emission Name | Rounded Result | RAF | NMOG / NMHC | Upward Diesel Adjustment Factor | Downward Diesel Adjustment Factor | Mult DF | Add DF | Std |
|---|---|---|---|---|---|---|---|---|---|
| 4,000 miles | CO | -- | -- | -- | 0.0036 | 0 | -- | -- | 10.5 |
| 4,000 miles | HC-NM+NOX | -- | -- | -- | 0.0031 | 0 | -- | -- | 0.40 |

# Certification Summary Information Report

| Test Group | FMBXT02.1U2A | Evaporative/Refueling Family | N/A |
|---|---|---|---|

## Glossary

| Useful Life | | | |
|---|---|---|---|
| 4 | 4,000 miles | 120 | 120,000 miles |
| 50 | 50,000 miles | 150 | 150,000 miles |
| 100 | 100,000 miles | | |

| Emission Name | | | |
|---|---|---|---|
| HC-TOTAL | Total Hydrocarbon | MFR FE | Manufacturer Fuel Economy |
| CO | Carbon Monoxide | HC | Hydrocarbon for Running Loss and ORVR |
| CO2 | Carbon dioxide | METHANE | CH4 - Methane |
| CREE | Carbon-Related Exhaust Emissions | METHANOL | CH3OH - Methanol |
| OPT-CREE | Optional Carbon-Related Exhaust Emissions | N2O | Nitrous Oxide |
| NOX | Nitrogen Oxide | SPITBACK | Spitback Hydrocarbon in grams |
| PM | Particulate Matter | AMP-HRS | Integrated Amp-hours |
| PM-COMP | SFTP Composite Particulate Matter | START-SOC | System Start State of Charge Watt-hours |
| HC-NM | Non-methane Hydrocarbon | END-SOC | System End State of Charge Watt-hours |
| OMHCE | Organic material Hydrocarbon Equivalent | ACT-DISTANCE | Actual Distance Driven (miles) |
| OMNMHCE | Organic material non-methane HC equivalent | AS-VOLT | Average System Voltage |
| NMOG | Non-methane organic gas (California) | CO2 BAG 1 | Bag 1 Carbon Dioxide |
| HCHO | Formaldehyde | CO2 BAG 2 | Bag 2 Carbon Dioxide |
| H3C2HO | Acetaldehyde | CO2 BAG 3 | Bag 3 Carbon Dioxide |
| HC-NM+NOX | SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03 | CO2 BAG 4 | Bag 4 Carbon Dioxide |
| HC-NM+NOX-COMP | SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides | NMOG+NOX | Non-methane organic gases plus Nitrogen Oxides |
| CO-COMP | SFTP Composite Carbon Monoxide | NMOG+NOX-COMP | SFTP Composite Non-methane Organic Gases + Nitrogen Oxides |
| ETHANOL | C2H5OH - Ethanol | DT-IWRR | Drive Trace Inertia Work Ratio Rating |
| FE BAG 1 | Bag 1 Fuel Economy | DT-ASCR | Drive Trace Absolute Speed Change Rating |
| FE BAG 2 | Bag 2 Fuel Economy | DT-EER | Drive Trace Energy Economy Rating |
| FE BAG 3 | Bag 3 Fuel Economy | COMB-CREE | Combined Carbon-Related Exhaust Emissions |
| FE BAG 4 | Bag 4 Fuel Economy | COMB-OPT-CREE | Combined Optional Carbon-Related Exhaust Emissions |

| Certification Region | | | |
|---|---|---|---|
| CA | California + CAA Section 177 states | FA | Federal |

| Exhaust Emission Standard Level | | | |
|---|---|---|---|
| B1 | Federal Tier 2 Bin 1 | L2SULEV30 | California LEV-II SULEV30 |
| B2 | Federal Tier 2 Bin 2 | L2LEV395 | California LEV-II LEV395 |
| B3 | Federal Tier 2 Bin 3 | L2ULEV340 | California LEV-II ULEV340 |
| B4 | Federal Tier 2 Bin 4 | L2LEV630 | California LEV-II LEV630 |
| B5 | Federal Tier 2 Bin 5 | L2ULEV570 | California LEV-II ULEV570 |
| B6 | Federal Tier 2 Bin 6 | L3LEV160 | California LEV-III LEV160 |
| B7 | Federal Tier 2 Bin 7 | L3ULEV125 | California LEV-III ULEV125 |
| B8 | Federal Tier 2 Bin 8 | L3ULEV70 | California LEV-III ULEV70 |

# Certification Summary Information Report

| **Test Group** | FMBXT02.1U2A | **Evaporative/Refueling Family** | N/A |
|---|---|---|---|
| B9 | Federal Tier 2 Bin 9 | L3ULEV50 | California LEV-III ULEV50 |
| B10 | Federal Tier 2 Bin 10 | L3SULEV30 | California LEV-III SULEV30 |
| B11 | Federal Tier 2 Bin 11 | L3SULEV20 | California LEV-III SULEV20 |
| HDV1 | HDV1 (Federal HD chassis Class 2b GVW 8501-10000) | L3LEV395 | California LEV-III LEV395 |
| HDV2 | HDV2 (Federal HD chassis Class 3 GVW 10001-14000) | L3ULEV340 | California LEV-III ULEV340 |
| L2 | California LEV-II LEV | L3ULEV250 | California LEV-III ULEV250 |
| L2OP | California LEV-II LEV Optional | L3ULEV200 | California LEV-III ULEV200 |
| U2 | California LEV-II ULEV | L3SULEV170 | California LEV-III SULEV170 |
| S2 | California LEV-II SULEV | L3SULEV150 | California LEV-III SULEV150 |
| ZEV | California ZEV | L3LEV630 | California LEV-III LEV630 |
| OT | Other | L3ULEV570 | California LEV-III ULEV570 |
| T1 | Federal Tier 1 | L3ULEV400 | California LEV-III ULEV400 |
| PZEV | California PZEV | L3ULEV270 | California LEV-III ULEV270 |
| L2LEV160 | California LEV-II LEV160 | L3SULEV230 | California LEV-III SULEV230 |
| L2ULEV125 | California LEV-II ULEV125 | L3SULEV200 | California LEV-III SULEV200 |
| **Transmission Type Code** | | | |
| AMS | Automated Manual- Selectable (e.g. Automated Manual with paddles) | M | Manual |
| A | Automatic | OT | Other |
| AM | Automated Manual | SA | Semi-Automatic |
| CVT | Continuously Variable | SCV | Selectable Continuously Variable (e.g. CVT with paddles) |
| **Drive System Code** | | | |
| 4 | 4-Wheel Drive | P | Part-time 4-Wheel Drive |
| F | 2-Wheel Drive, Front | A | All Wheel Drive |
| R | 2-Wheel Drive, Rear | | |
| **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 |