#### Light Duty Vehicle/Intermediate Age Notification Package: Instructions for Clean Alternative Fuel Conversion Manufacturers

This workbook contains data forms and compliance statements to be used by clean alternative fuel conversion manufacturers submitting a light duty vehicle/intermediate age notification package to EPA. The notification package includes test data, compliance statements, and all other information necessary to support the intermediate age vehicle demonstration requirements set forth in 40 CFR Part 85 subpart F. Please refer to the regulations for detailed compliance requirements. Intermediate age vehicles are defined as being of a model year that is at least as old as the current calendar year minus two (MY < CY-2), yet still within their regulatory useful life at the time of conversion. A conversion system becomes eligible for exemption from the Clean Air Act tampering prohibition upon EPA receipt of a complete notification package. Please note that the intermediate age notification process does NOT result in the issuance of a certificate of conformity.

#### **Excel Macros**

This form uses Excel macros. Please make sure that macros are enabled on your computer before trying to fill out the form. Different versions of Excel require different steps to enable macros. Please search the Excel help function for "Enable Macros" to get instructions on how to enable the interactive elements of this form.

#### Entering Data on the 'Data Form' Worksheet

On the worksheet labeled 'Data Form', fill out all grey-bordered fields that are not shaded green. The spreadsheet uses information from these fields to automatically calculate the green field values after the corresponding button is pressed.

Each notification package is identified by a unique conversion ID number. To generate a conversion ID number, click the "Generate Conversion ID Number" button the first time you fill out the data form. If a previous submission needs to be corrected and resubmitted, do not generate a new Conversion ID number, but use the same number as in the original submission so that the corrected form will be recognized as a correction to the original form.

Before clicking the button labeled "Calculate Scaled Multiplicative Deterioration Factors and Determine Full Useful Life":

- Make sure to select the correct full useful life (100K, 120K, or 150K)
- Enter the correct information into the blue-shaded fields

The cluster of green (computer calculated) fields in the data form worksheet show city and highway federal test procedure results which indicate whether the vehicle meets applicable exhaust emission standards.

Some conversion test groups may need to show compliance with intermediate useful life standards in addition to full useful life exhaust standards. For example, conversion test groups meeting EPA Tier 2 standards for Bins 5-8 must comply with the appropriate intermediate useful life (50,000 mile) standards. For these conversion test groups, you must enter the intermediate useful life test information and standards. To do this, check the checkbox titled "Intermediate useful life standard applies," and a second data form specifically for the intermediate useful life (50,000 mile) standard will appear. Fill out all the fields on that form accordingly.

If you are converting model year 2012 or newer light duty vehicles and the conversion is subject to green house gas standards, contact Martin Reineman at Reineman.Martin@epa.gov and provide all necessary data/reports as embedded documents at the bottom section of this sheet.

If your demonstration requirement includes evaporative emissions testing, please provide all necessary data as embedded documents in the bottom section of this sheet.

#### Entering Information on the 'Applicability' Worksheet

After the 'Data Form' worksheet is complete, use the 'Applicability' worksheet to enter the test groups that these data will be applied to.

#### **Compliance Statements**

The submission form will generate compliance statements based on the conversion type and conversion fuel selections on the 'Data Form' worksheet. These statements appear on the 'Compliance Statements' worksheet. Review the compliance statements and electronically sign and date that sheet by typing in your name and the date. Note that if your selection for conversion type and conversion fuel changes, the compliance statements may change. In this case, any signatures would be erased and would have to be re-entered.

A complete notification package must include the appropriate justifications for these compliance statements as well as all requirements in 40 CFR 85.515

#### **Embedding related/supporting documents**

All required notification documents required to be submitted as part of the data submission process must be embedded in this worksheet (see 40 CFR 85.515 subpart F for required documents). To embed a file, generally you would need to go to Insert -> Object -> Create From File (check the "Display as icon" box, but NOT the "Link to File" box). After browsing for the appropriate file, an icon representing the file should appear on this page. Click and drag the icon into the box below. A submission without all necessary documents will be considered incomplete.

Embedded documents go here			

#### Paper Work Reduction Act Notice

The public reporting and recordkeeping burden for this collection is estimated to average 18,244 hou per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, Washington, DC, 20460 and to the Office of Management and Budget (OMB), Paperwork Reduction Project (1910-1800), Washington, D.C. 20503. Include the OMB control number(s) in any correspondence. Do not send the completed form to this address.

EPA Form Number 5900-258

OMB Control Number 2060-0104

Expires XX/XX/XXXX

EPA ICR Number 0783.65

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# Light Duty Vehicle/Intermediate Age Notification Package: Clean Alternative Fuel Conversion Applicability Conversion Test Group: Conversion Evaporative/Refueling Family:

#### This conversion applies to the OEM test group and evaporative family combinations listed below

#	OEM Test Group	OEM Evap Family	OEM Manufacturer	OEM MY	Displacement (L)	OEM Fuel	OEM Models

Light Duty Vehicle/Intermediate Age Notification Package: Clean Alternative Fuel Conversion Data Form **Emission Data Vehicle (EDV) Information** Help Conversion Mfr. Name: EDV OEM: EDV Model Name: **EDV Model Year:** EDV Test Group: EDV Evap Family: Test Number(s): **EDV** Displacement: **EDV Transmission:** Conversion ID # Odometer: Generate Conversion ID Number O 2 O 3 O 4 O 5 O 6 O 7 O 8 O HDV O Not Applicable (Non Tier Testing to Tier II bin: Useful Life: ○ 100K ○ 120K ○ 150K ☐ Intermediate useful life standard applies Conversion Type: O Dedicated O Dual Fuel O Mixed Fuel Original Fuel: Converting to use: ○ E85 ○ CNG ○ LPG ○ Other, please specify: Using aged components -- deterioration factors not applicable **FTP Test Information** NMOG gpm: NOx gpm: CO gpm CO<sub>2</sub> gpm: MPG: HCHO gpm: **Highway Test Information** NOx gpm: NMOG gpm: CO gpm CO<sub>2</sub> gpm: MPG: HCHO gpm: Deterioration Factor, Standards, and Additional Information Help NMOG Assigned DF: NOx Assigned DF: CO Assigned DF: **HCHO Assigned DF:** FTP NMOG 120K Std: FTP NOx 120K Std: FTP CO 120K Std: FTP HCHO 120K Std: HWY NOx 120K Std: Calculate Scaled Additive Deterioration Factors and Determine Full Useful Life Test Results NMOG Scaled DF: NOx Scaled DF: CO Scaled DF: **HCHO Scaled DF:** FTP 120K Results (120K Scaled DF Applied) NMOG 120K gpm: NOx 120K gpm: HCHO 120K gpm: CO 120K gpm:

	Highway 120K Results (120K Scaled DF Applied)					
NOx 120K gpm:						
FTP Results:		HWY Results:				
	Evaporative/Re	efueling Data				
intermediate age vehicle pro emissions standards and ref bottom of the instructions sh	Clean alternative fuel conversion manufacturers seeking exemption from the tampering prohibition under the intermediate age vehicle program must submit data to demonstrate compliance with applicable evaporative emissions standards and refueling standards. You must embed your evaporative/refueling emissions data in the bottom of the instructions sheet. Please contact Martin Reineman at reineman.martin@epa.gov to discuss use of assigned deterioration factors or issues specific to your evaporative and refueling data.					
you may be eligible to attest	For conversions to CNG-, LPG-, and hydrogen- fueled vehicles with a closed fueling system, in lieu of test data, you may be eligible to attest that your test group complies with evaporative emission standards based on the manufacturer's engineering evaluation or appropriate testing and/or design parameters [40 CFR 86.1829-01(b)(2)].					
Additional Information						

# Light Duty Vehicle/Intermediate Age Notification Package: Clean Alternative Fuel Conversion Data Form Intermediate Useful Life Standards and Calculations

This sheet is for entering intermediate (50,000 miles) useful life standards and calculating emission results against it.

Det	erioration Factor, Standaı	ds, and Additional	Information	Help
NMOG Assigned DF:		NOx Assigned DF:		
CO Assigned DF:		HCHO Assigned DF:		
FTP NMOG 50K Std:		FTP NOx 50K Std:		
FTP CO 50K Std:		FTP HCHO 50K Std:		
HWY NOx 50K Std:				
	dditive Deterioration Factors and		Useful Life Test Results	
NMOG Scaled DF:		NOx Scaled DF:		
CO Scaled DF:		HCHO Scaled DF:		
	FTP 50K Results (50	K Scaled DF Applie	ed)	
NMOG 50K gpm:		NOx 50K gpm:		
CO 50K gpm:		HCHO 50K gpm:		
	Highway 50K Results (	50K Scaled DF App	lied)	
NOx 50K gpm:				
FTP Results:		HWY Results:		
Additional Information				

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### By electronically signing my name, I confirm/attest that I comply with applicable regulations in 40 CFR parts 85, 86, and 1065. I also confirm/attest:

- > I have submitted: a document that describes how the conversion system qualifies as a clean alternative fu conversion; passing results from the required exhaust and evaporative emissions tests; OBD scan tool results as applicable; and applicable exhaust and evaporative emission standards and deterioration factor 40 CFR 85.515(b)(10)(i).
- > I have submitted an OBD scan tool report, as applicable, showing results from the test procedures set for in 40 CFR 85. 515(b)(4)(ii). The results do not demonstrate a failed test. I have included the VIN number of the test vehicle on the report. 40 CFR 85.515(b)(9)(ii).
- > The test group converted to an alternative fuel has fully functional OBD systems (if the OEM vehicles a required to be OBD equipped) and therefore meets the OBD requirements in 40 CFR 86, subpart A when operating on the alternative fuel. The OBD system properly detects and identifies malfunctions in all monitored emission-related powertrain systems or components including any new monitoring capability necessary to identify potential emission problems associated with the new fuel. These include but are no limited to: fuel trim lean and rich monitors, catalyst deterioration monitors, engine misfire monitors, oxygen sensor deterioration monitors, EGR system monitors, if applicable, and vapor leak monitors, if applicable. No original OBD system monitor that is still applicable to the converted vehicle is aliased, removed, bypassed, or turned off. No MILs are illuminated after the conversion. Readiness flags are properly set for all monitors that identify any malfunction for all monitored components. 40 CFR 85.515(b)(9)(i) and (iii).
- > I attest that I have taken steps to ensure that fuel conversion systems will be properly installed and adjust such that the vehicle operates consistent with the principles of good engineering judgment and in accordance with all applicable regulations. 40 CFR 85.515(b)(13).
- > I have submitted a document that describes the conversion test group that is covered by this notification based on the criteria specified in 40 CFR 85.520(b)(1) and (b)(2) 40 CFR 85.515(b)(10)(ii).
- > I meet the criteria to qualify as a small volume manufacturer or this test group qualifies as small volume test group, and is permitted to use EPA assigned deterioration factors. 40 CFR 86.1838-01.
- > I have submitted a description of how the test vehicle selected qualifies as a worst-case vehicle under 40 CFR 86.1828-01. 40 CFR 85.515(b)(10)(i).
- > I have submitted detailed information confirming the durability of all relevant new and existing component and explaining why the conversion system will not harm the emission control system or degrade the emissions. 40 CFR 85.515(b)(5).

> I have submitted examples of all labeling and warranty information. 40 CFR 85.530(d).

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- > I attest that the test group converted to an alternative fuel has properly exercised the optional and applica statements of compliance or waivers in the certification regulations in 40 CFR part 86, subparts B, and S and 40 CFR part1065. 40 CFR 85.515(b)(10)(iii)(A).
- > I attest that based on an engineering evaluation of appropriate high-altitude emission testing, the vehicles this test group comply with emission standards at high altitude. 40 CFR 1829-01(b)(1)(ii)(B).
- > I attest that based on previous emission tests, development tests, or other appropriate information, vehicl in this test group comply with the particulate matter emission standard as applicable. 40 CFR 1829-01(b)(1)(iii)(B).
- > I attest that based on previous emission tests, development tests, or other appropriate information, vehicl in this test group comply with the formaldehyde emission standard as applicable. 40 CFR 86.1829-01(b)(1)(iii)(E) and (F).
- > I attest that based upon good engineering judgment, the converted vehicle meets the evaporative emissio standards specified in 40 CFR 86.1811-04(e). A closed fuel system has been installed in accordance wit current industry standard practice using the principles of good engineering judgment, and is leak free and will not show emissions deterioration for the useful life of the vehicle when the system is properly maintained. 40 CFR 85.515(b)(13).
- > I attest that a gaseous fuel filling receptacle on the converted vehicle meets current industry standard practice using the principles of good engineering judgment. 40 CFR 85.515(b)(13)
- > I attest that the test group converted to dual-fuel or mixed fuel operation retains all the OEM fuel system engine calibration, and emission control system functionality when operating on the fuel with which the vehicle was originally certified.40 CFR 85.515(b) (10)(iii)(B).
- > I attest that the test group converted to dual-fuel or mixed fuel operation retains all the functionality of th OEM OBD system (if required to be so equipped) when operating on the fuel with which the vehicle wa originally certified. 40 CFR 85.515(b) (10)(iii)(C).
- > I attest that the test group converted to dual-fuel or mixed fuel operation properly purges hydrocarbon vapor from the evaporative emission canister when the vehicles are operating on the alternative fuel. 40 CFR 85.515(b) (10)(iii)(D).

Signed:	Date:	
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# By electronically signing my name, I confirm/attest that I comply with applicable regulations in 40 CFR parts 85, 86, and 1065. I also confirm/attest:

- > I have submitted: a document that describes how the conversion system qualifies as a clean alternative further conversion; passing results from the required exhaust and evaporative emissions tests; OBD scan tool results as applicable; and applicable exhaust and evaporative emission standards and deterioration factor 40 CFR 85.515(b)(10)(i).
- > I have submitted an OBD scan tool report, as applicable, showing results from the test procedures set for in 40 CFR 85. 515(b)(4)(ii). The results do not demonstrate a failed test. I have included the VIN number of the test vehicle on the report. 40 CFR 85.515(b)(9)(ii).
- > The test group converted to an alternative fuel has fully functional OBD systems (if the OEM vehicles a required to be OBD equipped) and therefore meets the OBD requirements in 40 CFR 86, subpart A when operating on the alternative fuel. The OBD system properly detects and identifies malfunctions in all monitored emission-related powertrain systems or components including any new monitoring capability necessary to identify potential emission problems associated with the new fuel. These include but are no limited to: fuel trim lean and rich monitors, catalyst deterioration monitors, engine misfire monitors, oxygen sensor deterioration monitors, EGR system monitors, if applicable, and vapor leak monitors, if applicable. No original OBD system monitor that is still applicable to the converted vehicle is aliased, removed, bypassed, or turned off. No MILs are illuminated after the conversion. Readiness flags are properly set for all monitors that identify any malfunction for all monitored components. 40 CFR 85.515(b)(9)(i) and (iii).
- > I attest that I have taken steps to ensure that fuel conversion systems will be properly installed and adjust such that the vehicle operates consistent with the principles of good engineering judgment and in accordance with all applicable regulations. 40 CFR 85.515(b)(13).
- > I have submitted a document that describes the conversion test group that is covered by this notification based on the criteria specified in 40 CFR 85.520(b)(1) and (b)(2) 40 CFR 85.515(b)(10)(ii).
- > I meet the criteria to qualify as a small volume manufacturer or this test group qualifies as small volume test group, and is permitted to use EPA assigned deterioration factors. 40 CFR 86.1838-01.
- > I have submitted a description of how the test vehicle selected qualifies as a worst-case vehicle under 40 CFR 86.1828-01. 40 CFR 85.515(b)(10)(i).
- > I have submitted detailed information confirming the durability of all relevant new and existing component and explaining why the conversion system will not harm the emission control system or degrade the emissions. 40 CFR 85.515(b)(5).
- > I have submitted examples of all labeling and warranty information. 40 CFR 85.530(d).

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- > I attest that the test group converted to an alternative fuel has properly exercised the optional and applica statements of compliance or waivers in the certification regulations in 40 CFR part 86, subparts B, and S and 40 CFR part1065. 40 CFR 85.515(b)(10)(iii)(A).
- > I attest that based on an engineering evaluation of appropriate high-altitude emission testing, the vehicles this test group comply with emission standards at high altitude. 40 CFR 1829-01(b)(1)(ii)(B).
- > I attest that based on previous emission tests, development tests, or other appropriate information, vehicl in this test group comply with the particulate matter emission standard as applicable. 40 CFR 1829-01(b)(1)(iii)(B).
- > I attest that based on previous emission tests, development tests, or other appropriate information, vehicl in this test group comply with the formaldehyde emission standard as applicable. 40 CFR 86.1829-01(b)(1)(iii)(E) and (F).

Signed:	Date:	

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# By electronically signing my name, I confirm/attest that I comply with applicable regulations in 40 CFR parts 85, 86, and 1065. I also confirm/attest:

- > I have submitted: a document that describes how the conversion system qualifies as a clean alternative further conversion; passing results from the required exhaust and evaporative emissions tests; OBD scan tool results as applicable; and applicable exhaust and evaporative emission standards and deterioration factor 40 CFR 85.515(b)(10)(i).
- > I have submitted an OBD scan tool report, as applicable, showing results from the test procedures set for in 40 CFR 85. 515(b)(4)(ii). The results do not demonstrate a failed test. I have included the VIN number of the test vehicle on the report. 40 CFR 85.515(b)(9)(ii).
- > The test group converted to an alternative fuel has fully functional OBD systems (if the OEM vehicles a required to be OBD equipped) and therefore meets the OBD requirements in 40 CFR 86, subpart A when operating on the alternative fuel. The OBD system properly detects and identifies malfunctions in all monitored emission-related powertrain systems or components including any new monitoring capability necessary to identify potential emission problems associated with the new fuel. These include but are no limited to: fuel trim lean and rich monitors, catalyst deterioration monitors, engine misfire monitors, oxygen sensor deterioration monitors, EGR system monitors, if applicable, and vapor leak monitors, if applicable. No original OBD system monitor that is still applicable to the converted vehicle is aliased, removed, bypassed, or turned off. No MILs are illuminated after the conversion. Readiness flags are properly set for all monitors that identify any malfunction for all monitored components. 40 CFR 85.515(b)(9)(i) and (iii).
- > I attest that I have taken steps to ensure that fuel conversion systems will be properly installed and adjust such that the vehicle operates consistent with the principles of good engineering judgment and in accordance with all applicable regulations. 40 CFR 85.515(b)(13).
- > I have submitted a document that describes the conversion test group that is covered by this notification based on the criteria specified in 40 CFR 85.520(b)(1) and (b)(2) 40 CFR 85.515(b)(10)(ii).
- > I meet the criteria to qualify as a small volume manufacturer or this test group qualifies as small volume test group, and is permitted to use EPA assigned deterioration factors. 40 CFR 86.1838-01.
- > I have submitted a description of how the test vehicle selected qualifies as a worst-case vehicle under 40 CFR 86.1828-01. 40 CFR 85.515(b)(10)(i).
- > I have submitted detailed information confirming the durability of all relevant new and existing component and explaining why the conversion system will not harm the emission control system or degrade the emissions. 40 CFR 85.515(b)(5).
- > I have submitted examples of all labeling and warranty information. 40 CFR 85.530(d).

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- > I attest that the test group converted to an alternative fuel has properly exercised the optional and applica statements of compliance or waivers in the certification regulations in 40 CFR part 86, subparts B, and S and 40 CFR part1065. 40 CFR 85.515(b)(10)(iii)(A).
- > I attest that based on an engineering evaluation of appropriate high-altitude emission testing, the vehicles this test group comply with emission standards at high altitude. 40 CFR 1829-01(b)(1)(ii)(B).
- > I attest that based on previous emission tests, development tests, or other appropriate information, vehicl in this test group comply with the particulate matter emission standard as applicable. 40 CFR 1829-01(b)(1)(iii)(B).
- > I attest that based on previous emission tests, development tests, or other appropriate information, vehicl in this test group comply with the formaldehyde emission standard as applicable. 40 CFR 86.1829-01(b)(1)(iii)(E) and (F).

Signed:	Date:	

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# By electronically signing my name, I confirm/attest that I comply with applicable regulations in 40 CFR parts 85, 86, and 1065. I also confirm/attest:

- > I have submitted: a document that describes how the conversion system qualifies as a clean alternative further conversion; passing results from the required exhaust and evaporative emissions tests; OBD scan tool results as applicable; and applicable exhaust and evaporative emission standards and deterioration factor 40 CFR 85.515(b)(10)(i).
- > I have submitted an OBD scan tool report, as applicable, showing results from the test procedures set for in 40 CFR 85. 515(b)(4)(ii). The results do not demonstrate a failed test. I have included the VIN number of the test vehicle on the report. 40 CFR 85.515(b)(9)(ii).
- > The test group converted to an alternative fuel has fully functional OBD systems (if the OEM vehicles a required to be OBD equipped) and therefore meets the OBD requirements in 40 CFR 86, subpart A when operating on the alternative fuel. The OBD system properly detects and identifies malfunctions in all monitored emission-related powertrain systems or components including any new monitoring capability necessary to identify potential emission problems associated with the new fuel. These include but are no limited to: fuel trim lean and rich monitors, catalyst deterioration monitors, engine misfire monitors, oxygen sensor deterioration monitors, EGR system monitors, if applicable, and vapor leak monitors, if applicable. No original OBD system monitor that is still applicable to the converted vehicle is aliased, removed, bypassed, or turned off. No MILs are illuminated after the conversion. Readiness flags are properly set for all monitors that identify any malfunction for all monitored components. 40 CFR 85.515(b)(9)(i) and (iii).
- > I attest that I have taken steps to ensure that fuel conversion systems will be properly installed and adjust such that the vehicle operates consistent with the principles of good engineering judgment and in accordance with all applicable regulations. 40 CFR 85.515(b)(13).
- > I have submitted a document that describes the conversion test group that is covered by this notification based on the criteria specified in 40 CFR 85.520(b)(1) and (b)(2) 40 CFR 85.515(b)(10)(ii).
- > I meet the criteria to qualify as a small volume manufacturer or this test group qualifies as small volume test group, and is permitted to use EPA assigned deterioration factors. 40 CFR 86.1838-01.
- > I have submitted a description of how the test vehicle selected qualifies as a worst-case vehicle under 40 CFR 86.1828-01. 40 CFR 85.515(b)(10)(i).
- > I have submitted detailed information confirming the durability of all relevant new and existing component and explaining why the conversion system will not harm the emission control system or degrade the emissions. 40 CFR 85.515(b)(5).
- > I have submitted examples of all labeling and warranty information. 40 CFR 85.530(d).

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- > I attest that the test group converted to an alternative fuel has properly exercised the optional and applica statements of compliance or waivers in the certification regulations in 40 CFR part 86, subparts B, and S and 40 CFR part1065. 40 CFR 85.515(b)(10)(iii)(A).
- > I attest that based on an engineering evaluation of appropriate high-altitude emission testing, the vehicles this test group comply with emission standards at high altitude. 40 CFR 1829-01(b)(1)(ii)(B).
- > I attest that based on previous emission tests, development tests, or other appropriate information, vehicl in this test group comply with the particulate matter emission standard as applicable. 40 CFR 1829-01(b)(1)(iii)(B).
- > I attest that based on previous emission tests, development tests, or other appropriate information, vehicl in this test group comply with the formaldehyde emission standard as applicable. 40 CFR 86.1829-01(b)(1)(iii)(E) and (F).
- > I attest that the test group converted to dual-fuel or mixed fuel operation retains all the OEM fuel system engine calibration, and emission control system functionality when operating on the fuel with which the vehicle was originally certified.40 CFR 85.515(b) (10)(iii)(B).
- > I attest that the test group converted to dual-fuel or mixed fuel operation retains all the functionality of th OEM OBD system (if required to be so equipped) when operating on the fuel with which the vehicle wa originally certified. 40 CFR 85.515(b) (10)(iii)(C).
- > I attest that the test group converted to dual-fuel or mixed fuel operation properly purges hydrocarbon vapor from the evaporative emission canister when the vehicles are operating on the alternative fuel. 40 CFR 85.515(b) (10)(iii)(D).

Signed:	Date:	
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- > I have submitted an OBD scan tool report, as applicable, showing results from the test procedures set for in 40 CFR 85. 515(b)(4)(ii). The results do not demonstrate a failed test. I have included the VIN number of the test vehicle on the report. 40 CFR 85.515(b)(9)(ii).
- > The test group converted to an alternative fuel has fully functional OBD systems (if the OEM vehicles a required to be OBD equipped) and therefore meets the OBD requirements in 40 CFR 86, subpart A when operating on the alternative fuel. The OBD system properly detects and identifies malfunctions in all monitored emission-related powertrain systems or components including any new monitoring capability necessary to identify potential emission problems associated with the new fuel. These include but are no limited to: fuel trim lean and rich monitors, catalyst deterioration monitors, engine misfire monitors, oxygen sensor deterioration monitors, EGR system monitors, if applicable, and vapor leak monitors, if applicable. No original OBD system monitor that is still applicable to the converted vehicle is aliased, removed, bypassed, or turned off. No MILs are illuminated after the conversion. Readiness flags are properly set for all monitors that identify any malfunction for all monitored components. 40 CFR 85.515(b)(9)(i) and (iii).
- > I attest that I have taken steps to ensure that fuel conversion systems will be properly installed and adjust such that the vehicle operates consistent with the principles of good engineering judgment and in accordance with all applicable regulations. 40 CFR 85.515(b)(13).
- > I have submitted a document that describes the conversion test group that is covered by this notification based on the criteria specified in 40 CFR 85.520(b)(1) and (b)(2) 40 CFR 85.515(b)(10)(ii).
- > I meet the criteria to qualify as a small volume manufacturer or this test group qualifies as small volume test group, and is permitted to use EPA assigned deterioration factors. 40 CFR 86.1838-01.
- > I have submitted a description of how the test vehicle selected qualifies as a worst-case vehicle under 40 CFR 86.1828-01. 40 CFR 85.515(b)(10)(i).
- > I have submitted detailed information confirming the durability of all relevant new and existing component and explaining why the conversion system will not harm the emission control system or degrade the emissions. 40 CFR 85.515(b)(5).
- > I have submitted examples of all labeling and warranty information. 40 CFR 85.530(d).

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- > I attest that the test group converted to an alternative fuel has properly exercised the optional and applica statements of compliance or waivers in the certification regulations in 40 CFR part 86, subparts B, and S and 40 CFR part1065. 40 CFR 85.515(b)(10)(iii)(A).
- > I attest that based on an engineering evaluation of appropriate high-altitude emission testing, the vehicles this test group comply with emission standards at high altitude. 40 CFR 1829-01(b)(1)(ii)(B).
- > I attest that based on previous emission tests, development tests, or other appropriate information, vehicl in this test group comply with the particulate matter emission standard as applicable. 40 CFR 1829-01(b)(1)(iii)(B).
- > I attest that based on previous emission tests, development tests, or other appropriate information, vehicl in this test group comply with the formaldehyde emission standard as applicable. 40 CFR 86.1829-01(b)(1)(iii)(E) and (F).
- > I attest that the test group converted to dual-fuel or mixed fuel operation retains all the OEM fuel system engine calibration, and emission control system functionality when operating on the fuel with which the vehicle was originally certified.40 CFR 85.515(b) (10)(iii)(B).
- > I attest that the test group converted to dual-fuel or mixed fuel operation retains all the functionality of th OEM OBD system (if required to be so equipped) when operating on the fuel with which the vehicle wa originally certified. 40 CFR 85.515(b) (10)(iii)(C).
- > I attest that the test group converted to dual-fuel or mixed fuel operation properly purges hydrocarbon vapor from the evaporative emission canister when the vehicles are operating on the alternative fuel. 40 CFR 85.515(b) (10)(iii)(D).

Signed:	Date:	
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# By electronically signing my name, I confirm/attest that I comply with applicable regulations in 40 CFR parts 85, 86, and 1065. I also confirm/attest:

- > I have submitted: a document that describes how the conversion system qualifies as a clean alternative full conversion; passing results from the required exhaust and evaporative emissions tests; OBD scan tool results as applicable; and applicable exhaust and evaporative emission standards and deterioration factor 40 CFR 85.515(b)(10)(i).
- > I have submitted an OBD scan tool report, as applicable, showing results from the test procedures set for in 40 CFR 85. 515(b)(4)(ii). The results do not demonstrate a failed test. I have included the VIN number of the test vehicle on the report. 40 CFR 85.515(b)(9)(ii).
- > The test group converted to an alternative fuel has fully functional OBD systems (if the OEM vehicles a required to be OBD equipped) and therefore meets the OBD requirements in 40 CFR 86, subpart A when operating on the alternative fuel. The OBD system properly detects and identifies malfunctions in all monitored emission-related powertrain systems or components including any new monitoring capability necessary to identify potential emission problems associated with the new fuel. These include but are no limited to: fuel trim lean and rich monitors, catalyst deterioration monitors, engine misfire monitors, oxygen sensor deterioration monitors, EGR system monitors, if applicable, and vapor leak monitors, if applicable. No original OBD system monitor that is still applicable to the converted vehicle is aliased, removed, bypassed, or turned off. No MILs are illuminated after the conversion. Readiness flags are properly set for all monitors that identify any malfunction for all monitored components. 40 CFR 85.515(b)(9)(i) and (iii).
- > I attest that I have taken steps to ensure that fuel conversion systems will be properly installed and adjust such that the vehicle operates consistent with the principles of good engineering judgment and in accordance with all applicable regulations. 40 CFR 85.515(b)(13).
- > I have submitted a document that describes the conversion test group that is covered by this notification based on the criteria specified in 40 CFR 85.520(b)(1) and (b)(2) 40 CFR 85.515(b)(10)(ii).
- > I meet the criteria to qualify as a small volume manufacturer or this test group qualifies as small volume test group, and is permitted to use EPA assigned deterioration factors. 40 CFR 86.1838-01.
- > I have submitted a description of how the test vehicle selected qualifies as a worst-case vehicle under 40 CFR 86.1828-01. 40 CFR 85.515(b)(10)(i).
- > I have submitted detailed information confirming the durability of all relevant new and existing component and explaining why the conversion system will not harm the emission control system or degrade the emissions. 40 CFR 85.515(b)(5).
- > I have submitted examples of all labeling and warranty information. 40 CFR 85.530(d).

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- > I attest that the test group converted to an alternative fuel has properly exercised the optional and applica statements of compliance or waivers in the certification regulations in 40 CFR part 86, subparts B, and S and 40 CFR part1065. 40 CFR 85.515(b)(10)(iii)(A).
- > I attest that based on an engineering evaluation of appropriate high-altitude emission testing, the vehicles this test group comply with emission standards at high altitude. 40 CFR 1829-01(b)(1)(ii)(B).
- > I attest that based on previous emission tests, development tests, or other appropriate information, vehicl in this test group comply with the particulate matter emission standard as applicable. 40 CFR 1829-01(b)(1)(iii)(B).
- > I attest that the test group converted to dual-fuel or mixed fuel operation retains all the OEM fuel system engine calibration, and emission control system functionality when operating on the fuel with which the vehicle was originally certified.40 CFR 85.515(b) (10)(iii)(B).
- > I attest that the test group converted to dual-fuel or mixed fuel operation retains all the functionality of th OEM OBD system (if required to be so equipped) when operating on the fuel with which the vehicle was originally certified. 40 CFR 85.515(b) (10)(iii)(C).
- > I attest that the test group converted to dual-fuel or mixed fuel operation properly purges hydrocarbon vapor from the evaporative emission canister when the vehicles are operating on the alternative fuel. 40 CFR 85.515(b) (10)(iii)(D).

Signed:	Date:

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Det	terioration Factor, Stand	ards, and Additional	Information
NMOG Assigned DF:		NOx Assigned DF:	
CO Assigned DF:			
FTP NMOG 50K Std:	1	FTP NOx 50K Std:	1
FTP CO 50K Std:	1		
HWY NOx 50K Std:	1		
NMOG Scaled DF:		NOx Scaled DF:	
CO Scaled DF:			
	FTP 50K Results (5	<b>50K Scaled DF Appli</b> e	ed)
NMOG 50K gpm:		NOx 50K gpm:	
CO 50K gpm:			
	Highway 50K Results	(50K Scaled DF App	olied)
NOx 50K gpm:			
FTP Results:		HWY Results:	
Additional Information			

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Deterioration Factor, Standards, and Additional Information						
NMOG Assigned DF:		NOx Assigned DF:				
CO Assigned DF:		HCHO Assigned DF:				
FTP NMOG 50K Std:	1	FTP NOx 50K Std:	1			
FTP CO 50K Std:	1	FTP HCHO 50K Std:				
HWY NOx 50K Std:	1					
NMOG Scaled DF:		NOx Scaled DF:				
CO Scaled DF:		HCHO Scaled DF:				
	FTP 50K Results (5	<b>0K Scaled DF Appli</b>	ed)			
NMOG 50K gpm:		NOx 50K gpm:				
CO 50K gpm:		HCHO 50K gpm:				
Highway 50K Results (50K Scaled DF Applied)						
NOx 50K gpm:						
FTP Results:		HWY Results:				
Additional Information						

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# By electronically signing my name, I confirm/attest that I comply with applicable regulations in 40 CFR parts 85, 86, and 1065. I also confirm/attest:

- > I have submitted: a document that describes how the conversion system qualifies as a clean alternative further conversion; passing results from the required exhaust and evaporative emissions tests; OBD scan tool results as applicable; and applicable exhaust and evaporative emission standards and deterioration factor 40 CFR 85.515(b)(10)(i).
- > I have submitted an OBD scan tool report, as applicable, showing results from the test procedures set for in 40 CFR 85. 515(b)(4)(ii). The results do not demonstrate a failed test. I have included the VIN number of the test vehicle on the report. 40 CFR 85.515(b)(9)(ii).
- > The test group converted to an alternative fuel has fully functional OBD systems (if the OEM vehicles a required to be OBD equipped) and therefore meets the OBD requirements in 40 CFR 86, subpart A when operating on the alternative fuel. The OBD system properly detects and identifies malfunctions in all monitored emission-related powertrain systems or components including any new monitoring capability necessary to identify potential emission problems associated with the new fuel. These include but are no limited to: fuel trim lean and rich monitors, catalyst deterioration monitors, engine misfire monitors, oxygen sensor deterioration monitors, EGR system monitors, if applicable, and vapor leak monitors, if applicable. No original OBD system monitor that is still applicable to the converted vehicle is aliased, removed, bypassed, or turned off. No MILs are illuminated after the conversion. Readiness flags are properly set for all monitors that identify any malfunction for all monitored components. 40 CFR 85.515(b)(9)(i) and (iii).
- > I attest that I have taken steps to ensure that fuel conversion systems will be properly installed and adjust such that the vehicle operates consistent with the principles of good engineering judgment and in accordance with all applicable regulations. 40 CFR 85.515(b)(13).
- > I have submitted a document that describes the conversion test group that is covered by this notification based on the criteria specified in 40 CFR 85.520(b)(1) and (b)(2) 40 CFR 85.515(b)(10)(ii).
- > I meet the criteria to qualify as a small volume manufacturer or this test group qualifies as small volume test group, and is permitted to use EPA assigned deterioration factors. 40 CFR 86.1838-01.
- > I have submitted a description of how the test vehicle selected qualifies as a worst-case vehicle under 40 CFR 86.1828-01. 40 CFR 85.515(b)(10)(i).
- > I have submitted detailed information confirming the durability of all relevant new and existing component and explaining why the conversion system will not harm the emission control system or degrade the emissions. 40 CFR 85.515(b)(5).
- > I have submitted examples of all labeling and warranty information. 40 CFR 85.530(d).

- > I attest that the test group converted to an alternative fuel has properly exercised the optional and applica statements of compliance or waivers in the certification regulations in 40 CFR part 86, subparts B, and S and 40 CFR part1065. 40 CFR 85.515(b)(10)(iii)(A).
- > I attest that based on an engineering evaluation of appropriate high-altitude emission testing, the vehicles this test group comply with emission standards at high altitude. 40 CFR 1829-01(b)(1)(ii)(B).
- > I attest that based on previous emission tests, development tests, or other appropriate information, vehicl in this test group comply with the particulate matter emission standard as applicable. 40 CFR 1829-01(b)(1)(iii)(B).

Signed:	Date:	

### By electronically signing my name, I confirm/attest that I comply with applicable regulations in 40 CFR parts 85, 86, and 1065. I also confirm/attest:

- > I have submitted: a document that describes how the conversion system qualifies as a clean alternative fuel conversion; passing results from the required exhaust and evaporative emissions tests; OBD scan tool results as applicable; and applicable exhaust and evaporative emission standards and deterioration factors. 40 CFR 85.515(b)(10)(i).
- > I have submitted an OBD scan tool report, as applicable, showing results from the test procedures set forth in 40 CFR 85. 515(b)(4)(ii). The results do not demonstrate a failed test. I have included the VIN number of the test vehicle on the report. 40 CFR 85.515(b)(9)(ii).
- > The test group converted to an alternative fuel has fully functional OBD systems (if the OEM vehicles are required to be OBD equipped) and therefore meets the OBD requirements in 40 CFR 86, subpart A when operating on the alternative fuel. The OBD system properly detects and identifies malfunctions in all monitored emission-related powertrain systems or components including any new monitoring capability necessary to identify potential emission problems associated with the new fuel. These include but are not limited to: fuel trim lean and rich monitors, catalyst deterioration monitors, engine misfire monitors, oxygen sensor deterioration monitors, EGR system monitors, if applicable, and vapor leak monitors, if applicable. No original OBD system monitor that is still applicable to the converted vehicle is aliased, removed, bypassed, or turned off. No MILs are illuminated after the conversion. Readiness flags are properly set for all monitors that identify any malfunction for all monitored components. 40 CFR 85.515(b)(9)(i) and (iii).
- > I attest that I have taken steps to ensure that fuel conversion systems will be properly installed and adjusted such that the vehicle operates consistent with the principles of good engineering judgment and in accordance with all applicable regulations. 40 CFR 85.515(b)(13).
- > I have submitted a document that describes the conversion test group that is covered by this notification based on the criteria specified in 40 CFR 85.520(b)(1) and (b)(2) 40 CFR 85.515(b)(10)(ii).
- > I meet the criteria to qualify as a small volume manufacturer or this test group qualifies as small volume test group, and is permitted to use EPA assigned deterioration factors. 40 CFR 86.1838-01.
- > I have submitted a description of how the test vehicle selected qualifies as a worst-case vehicle under 40 CFR 86.1828-01. 40 CFR 85.515(b)(10)(i).
- > I have submitted detailed information confirming the durability of all relevant new and existing components and explaining why the conversion system will not harm the emission control system or degrade the emissions. 40 CFR 85.515(b)(5).

> I have submitted examples of all labeling and warranty information. 40 CFR 85.530(d).

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- > I attest that the test group converted to an alternative fuel has properly exercised the optional and applicable statements of compliance or waivers in the certification regulations in 40 CFR part 86, subparts B, and S and 40 CFR part1065. 40 CFR 85.515(b)(10)(iii)(A).
- > I attest that based on an engineering evaluation of appropriate high-altitude emission testing, the vehicles in this test group comply with emission standards at high altitude. 40 CFR 1829-01(b)(1)(ii)(B).
- > I attest that based on previous emission tests, development tests, or other appropriate information, vehicles in this test group comply with the particulate matter emission standard as applicable. 40 CFR 1829-01(b)(1)(iii)(B).
- > I attest that based on previous emission tests, development tests, or other appropriate information, vehicles in this test group comply with the formaldehyde emission standard as applicable. 40 CFR 86.1829-01(b)(1)(iii)(E) and (F).
- > I attest that based upon good engineering judgment, the converted vehicle meets the evaporative emission standards specified in 40 CFR 86.1811-04(e). A closed fuel system has been installed in accordance with current industry standard practice using the principles of good engineering judgment, and is leak free and will not show emissions deterioration for the useful life of the vehicle when the system is properly maintained. 40 CFR 85.515(b)(13).
- > I attest that a gaseous fuel filling receptacle on the converted vehicle meets current industry standard practice using the principles of good engineering judgment. 40 CFR 85.515(b)(13)

Signed:	Date:

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# By electronically signing my name, I confirm/attest that I comply with applicable regulations in 40 CFR parts 85, 86, and 1065. I also confirm/attest:

- > I have submitted: a document that describes how the conversion system qualifies as a clean alternative further conversion; passing results from the required exhaust and evaporative emissions tests; OBD scan tool results as applicable; and applicable exhaust and evaporative emission standards and deterioration factor 40 CFR 85.515(b)(10)(i).
- > I have submitted an OBD scan tool report, as applicable, showing results from the test procedures set for in 40 CFR 85. 515(b)(4)(ii). The results do not demonstrate a failed test. I have included the VIN number of the test vehicle on the report. 40 CFR 85.515(b)(9)(ii).
- > The test group converted to an alternative fuel has fully functional OBD systems (if the OEM vehicles a required to be OBD equipped) and therefore meets the OBD requirements in 40 CFR 86, subpart A when operating on the alternative fuel. The OBD system properly detects and identifies malfunctions in all monitored emission-related powertrain systems or components including any new monitoring capability necessary to identify potential emission problems associated with the new fuel. These include but are no limited to: fuel trim lean and rich monitors, catalyst deterioration monitors, engine misfire monitors, oxygen sensor deterioration monitors, EGR system monitors, if applicable, and vapor leak monitors, if applicable. No original OBD system monitor that is still applicable to the converted vehicle is aliased, removed, bypassed, or turned off. No MILs are illuminated after the conversion. Readiness flags are properly set for all monitors that identify any malfunction for all monitored components. 40 CFR 85.515(b)(9)(i) and (iii).
- > I attest that I have taken steps to ensure that fuel conversion systems will be properly installed and adjust such that the vehicle operates consistent with the principles of good engineering judgment and in accordance with all applicable regulations. 40 CFR 85.515(b)(13).
- > I have submitted a document that describes the conversion test group that is covered by this notification based on the criteria specified in 40 CFR 85.520(b)(1) and (b)(2) 40 CFR 85.515(b)(10)(ii).
- > I meet the criteria to qualify as a small volume manufacturer or this test group qualifies as small volume test group, and is permitted to use EPA assigned deterioration factors. 40 CFR 86.1838-01.
- > I have submitted a description of how the test vehicle selected qualifies as a worst-case vehicle under 40 CFR 86.1828-01. 40 CFR 85.515(b)(10)(i).
- > I have submitted detailed information confirming the durability of all relevant new and existing component and explaining why the conversion system will not harm the emission control system or degrade the emissions. 40 CFR 85.515(b)(5).
- > I have submitted examples of all labeling and warranty information. 40 CFR 85.530(d).

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- > I attest that the test group converted to an alternative fuel has properly exercised the optional and applica statements of compliance or waivers in the certification regulations in 40 CFR part 86, subparts B, and S and 40 CFR part1065. 40 CFR 85.515(b)(10)(iii)(A).
- > I attest that based on an engineering evaluation of appropriate high-altitude emission testing, the vehicles this test group comply with emission standards at high altitude. 40 CFR 1829-01(b)(1)(ii)(B).
- > I attest that based on previous emission tests, development tests, or other appropriate information, vehicl in this test group comply with the particulate matter emission standard as applicable. 40 CFR 1829-01(b)(1)(iii)(B).
- > I attest that based on previous emission tests, development tests, or other appropriate information, vehicl in this test group comply with the formaldehyde emission standard as applicable. 40 CFR 86.1829-01(b)(1)(iii)(E) and (F).
- > I attest that based upon good engineering judgment, the converted vehicle meets the evaporative emissio standards specified in 40 CFR 86.1811-04(e). A closed fuel system has been installed in accordance wit current industry standard practice using the principles of good engineering judgment, and is leak free and will not show emissions deterioration for the useful life of the vehicle when the system is properly maintained. 40 CFR 85.515(b)(13).
- > I attest that a gaseous fuel filling receptacle on the converted vehicle meets current industry standard practice using the principles of good engineering judgment. 40 CFR 85.515(b)(13)
- > I attest that the test group converted to dual-fuel or mixed fuel operation retains all the OEM fuel system engine calibration, and emission control system functionality when operating on the fuel with which the vehicle was originally certified.40 CFR 85.515(b) (10)(iii)(B).
- > I attest that the test group converted to dual-fuel or mixed fuel operation retains all the functionality of t OEM OBD system (if required to be so equipped) when operating on the fuel with which the vehicle wa originally certified. 40 CFR 85.515(b) (10)(iii)(C).
- > I attest that the test group converted to dual-fuel or mixed fuel operation properly purges hydrocarbon vapor from the evaporative emission canister when the vehicles are operating on the alternative fuel. 40 CFR 85.515(b) (10)(iii)(D).

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