

United States

US Environmental Protection Agency

Office of Air and Radiation, Office of Transportation and Air Quality

Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

Manufacturer Data Submission Template -- INSTRUCTIONS

This template allows manufacturers of Marine Compression-Ignition (CI) engines to submit production line testing (PLT) data in a simple, consistent format. Based on the information entered by the submitter, the template performs the required calculation of the final test result and displays the current status of the test. This template is intended for use by manufacturers subject to either Part 194 or Part 1042. If your engines are subject to Part 1042, you may choose to test your engines using the CumSum methodology in accordance with the procedures outlined in 40 CFR Part 1045 or Part 1051 (see 40 CFR 1042.301(d)(2)). This template has not been designed to accept data from the CumSum methodology; if you choose to test your engines using CumSum you must use the separate Marine CI PLT template that was created for this purpose.

It is intended that a copy of this template be created for each Category for which the reporting of PLT results are required. These data must be submitted on a quarterly basis in accordance with 40 CFR Part 1042.345(a) and 40 CFR Part 94.508(e). It is intended that one copy of a template be maintained per Category, per year, and results should be cumulative. For instance, the file submitted for the second quarter will contain all test results previously submitted for the first quarter with the results from the second quarter added on. The Summary worksheet provides a field to indicate the associated quarter

The template is organized into several worksheets, including a "Summary" worksheet that includes both preliminary information as entered by the manufacturer and overall compliance information based on the actual PLT data entered in subsequent worksheets (i.e., Engine Family #1, Engine Family #2, etc.). There are worksheets for 30 engine families and two additional tabs ("Invalid Tests" and "Notes") that allow for the submittal of invalid test results and any other relevant notes that the manufacturer would like to submit with the test results. In all of the worksheets, values may be modified only in cells that are white - the green shaded cells contain either labels or calculated values.

Before entering data in this template, international users should ensure that the settings in Excel for number handling are consistent with the template. Number handling settings that currently specify the use of a comma for the decimal separator and a period for the thousands separator must be temporarily modified to avoid errors within the automatic calculations. To modify the number handling settings when using Excel 2010, go to the file tab at the upper left of the Excel workbook and click "Options". On the resulting window click "Advanced", uncheck the "Use system separators" box and then insert a period for the decimal separator and a comma for the thousands separator. When using Excel 2007, first click the office button, then click "Excel Options". On the resulting window click "Advanced", uncheck the "Use system separators" box and then insert a period for the decimal separator and a comma for the thousands separator. For Excel 2003,go to the "Tools" menu and select "Options." In the window that appears, the "International" tab should be selected. At the top of this tab there will be a section at the top entitled "Number handling"; the check mark in the "Use system separators" box found within this section should be removed. At this point, a period should be inserted for the decimal separator and a comma should be inserted for the thousands separator.

II. Entering General Information

Before entering data for each engine family, some information on the manufacturer and the Category should be entered into the worksheet labeled "Summary." The top portion of this worksheet includes spaces to enter general information about the PLT test. These fields include

- Manufacturer contact information (manufacturer name, PLT contact, email, and phone);
- Category (select Category 1, Category 2, or Category 3); and
 Current quarter.

There is an additional field for comments. Based on the quarter selected, a set of fields will appear where actual quarter-by-quarter production values will appear based on the

The required engine sample size is calculated as follows (and includes any additional engines tested as a part of the follow-up that is required when an engine fails a test (see 40

- For Category 1 engines subject to Part 94 the required sample size for the category is 1% of the Category 1 projected annual production volume if this is greater than or equal to 100, and 0 if the Category 1 projected annual production is less than 100 (40 CFR 94.505(a)(1)(i)).
 For Category 1 engines subject to Part 1042 the required sample size for the category is 1% of the Category 1 projected annual production volume, with a minimum sample size
- of 1 (40 CFR 1042.310(a)(1)).
 For Category 2 engines subject to Part 94 the required sample size for each engine family is 1% of the engine family's projected annual production volume, with a minimum sample size of 1 (40 CFR 94.505(a)(1)(ii)).
 For Category 2 engines subject to Part 1042 the required sample size for the category is 1% of the Category 2 projected annual production volume, with a minimum sample size
- of 1 (40 CFR 1042.310(a)(2))

Regardless of the Part or the Category, projected annual production is entered on a per engine family basis on each engine family sheet and while the number of required tests for the Engine Family is displayed in cell N17, the actual minimum required engine sample size is displayed in the Summary sheet in cell L16. As described in the notes below, cell L16 in the Summary sheet reflects the required sample size for Part 1042 Category 1 and 2 engines and Part 94 Category 1 engines. The required sample size for Part 94 Category 2 is calculated by Engine Family, and as a result, cell N17 is the relevant field that displays the proper required sample size.

Note that the projected annual production for the category is calculated by summing up the individual values for the engine families and is displayed on the Summary sheet. The number of completed engine family tests is also calculated from the Engine Family sheets and is displayed on the Summary sheet. Following are some notes that reiterate the logic and structure surrounding the required sample size calculation

IMPORTANT NOTES REGARDING SAMPLE SIZE CALCULATIONS:

- 1. For Part 1042 Category 1 and 2 engines and Part 94 Category 1 engines, the minimum engine sample size for the category is displayed on the Summary sheet.
- 2. For Part 94, Category 2 engines, the required sample size will be displayed within each individual Engine Family worksheet (i.e., Required Tests) since the number of required tests is based on 1% of the Engine Family production (per 94.505(a)(1)(ii)). As such, the underlying formulas have been structured such that if Category 2 applies, the "Minimum Required Engine Sample Size for Category" field in the Summary sheet will only reflect Part 1042 Engine Family data from the corresponding worksheets.
- 3. For Part 94, Category 1 sample size calculations, the Summary sheet will include the correct sample size for the Category. However, within each individual Engine Family worksheet, if the projected production is less than 50, the required tests in cell N17 will display as zero. If the projected production for all Part 94, Category 1 Engine Families is less than 100, the sample size requirement for all of those Engine Families is zero (which will be displayed as such in Cell L16 within the Summary sheet). However, if the projected production for these Engine Families is greater than 100, the total is spread between more than one Engine Family, and the number of subject Engine Families is greater than the number of required tests (as displayed in cell L16), the user may select the Engine Family or Families for testing in order to meet the overall testing requirement. If there are questions regarding which Engine Families to test, manufacturers should obtain additional clarification from their Certification Representative.

Note that if there is a pre-approved reduced sample size, the minimum sample size is set equal to this value (assuming that the pre-approved size entered is less than the sample size calculated in accordance with the corresponding guidelines for Category 1 or 2). A reduced sample size may be pre-approved if the engine family has been certified with carry-over emissions data (40 CFR 1042.301(e) and 40 CFR 94.503(d)).

For Part 1042 Category 1 and 2 engines and Part 94 Category 1 engines, the sample size status in Column R of the Summary sheet will be displayed for each Engine Family record as either "OPEN" or "PASS". If the total engine sample size is greater than or equal to the minimum required sample size, this status is displayed as "PASS" or West-status is displayed as "OPEN". For Part 94 Category 2 engines, the sample size status is displayed to the right of the Comments field within the Engine Family worksheets and as with the Category status indicator, will display either "PASS" or "OPEN" depending on the required sample size and the number of tests completed.

III. Entering PLT Engine Test Results

Following the "Summary" worksheet, there are multiple worksheets for "Engine Family #1" through "Engine Family #30." Using these worksheets, enter PLT data for each engine family for CO, PM, HC, and NOx (HC and NOx values are summed and displayed as a combined NOx+HC value, if this option was indicated on the individual Engine Family worksheet). Please note that for Category 3 results only need to be entered for NOx; however, for both Category 1 and Category 2 results must be entered for CO, PM, HC, and NOx in order to ensure that the calculations are done properly.

Enter data for the test location/description, whether the engine family is a carryover, reduced sample size (if applicable), fuel type and whether the engine family is Recreational or Commercial. Note that 'HC' refers to 'THC' for diesel fuel, 'NMHC' natural gas fuel, and 'THCE' for alcohol fuel. When the fuel type is selected, a note appears reminding the user of the correct HC variant for the selected fuel. Enter the Model Year, Tier, whether NOx+HC is combined, and 40 CFR Part. Note that a selection of "Y" or "N" is required in the field indicating whether NOx+HC is combined in order to ensure that the results in the Summary worksheet are accurate and properly displayed.

The engine family name is then entered followed by the engine family's projected annual production, the start/end dates for production and the deterioration factor type, which must be specified as either additive or multiplicative and is automatically displayed in the "Det Factor Type" fields for all pollutants. The subsequent field should be set to "Y" once all test data have been entered to indicate that the test data can be factored into the compliance assessment within the Summary sheet. Under these fields, data for actual production by quarter can be entered. To the right of these fields, enter the FEL/standard, deterioration factor, and green engine factor (if applicable) for each pollutant

The engine test results should be entered in the "PLT Engine Test Results" section within the Engine Family worksheet in the order in which they occur. The first fourteen fields includes information specific to the test. The initial result can be entered for each pollutant the relevant columns. The final result and deteriorated final result are displayed if the "Calc Final Result?" field in column B is "Y." At the far right, open fields are available to enter data related to failed tests (if applicable). Failed tests will result in an upward displayed in the column B is "Y." At the far right, open fields are available to enter data related to failed tests (if applicable). Failed tests will result in an upward

Note that for Category 3 engines, only NOx results need to be entered. The template has been designed so that for Category 3 engines, the engine family PLT status is determined solely on the basis of the NOx results.

The Test Engine worksheets should only include valid test results. Invalid test results should be entered in the "Invalid Tests" worksheet. Any additional notes or information relevant to the PLT information for the engine family can be included in the "Notes" worksheet.

IV. Compliance Summary

the PLT tests as entered in the Engine Family worksheets. As described below, the summary information shows a Sample Size Status, Test Status, and a Compliance Status for each engine family.

- Sample Size Status: This value will be OPEN if the number of tests performed for the engine family is less than the required amount (including follow-ups to falled tests. Otherwise, this value will be PASS
- Test Status: This value will be FAIL if a failed status is indicated for any one pollutant. This value will be PASS if all pollutants for the engine family have a passing status.
- Compliance Status: If both the test status and sample size status have a value of PASS, the compliance status also has a value of PASS. If the test status has a value of FAIL, then the compliance status will have a value of FAIL regardless of the sample size status value. If the test status has a value of PASS and the sample size status has a value of PASS and the sample size status has a value of OPEN, then the compliance status value will be OPEN.

In addition to the sample size status for engine families, for Part 1042 engines and Part 94, Category 1 engines a sample size status is displayed for the category as well. The value of this status will be either OPEN or PASS. If the value is OPEN then a message will appear indicating how many additional tests are needed across the category. Due to rounding it is possible for the sample size status for the category to be OPEN even if the sample size status for all of the engine families is PASS. IV. Compliance Summary

The far right portion of the "Summary" worksheet (below the general information entered previously, as described in Section II) includes the summary compliance information for the PLT tests as entered in the Engine Family worksheets. As described below, the summary information shows a Sample Size Status, Test Status, and a Compliance Status for each engine family.

- Sample Size Status: This value will be OPEN if the number of tests performed for the engine family is less than the required amount (including follow-ups to falled tests. Otherwise, this value will be PASS.
- Test Status: This value will be FAIL if a failed status is indicated for any one pollutant. This value will be PASS if all pollutants for the engine family have a passing status.
- Compliance Status: If both the test status and sample size status have a value of PASS, the compliance status also has a value of PASS. If the test status has a value of FAIL, then the compliance status will have a value of FAIL regardless of the sample size status value. If the test status has a value of PASS and the sample size status has a value of OPEN, then the compliance status value will be OPEN.

In addition to the sample size status for engine families, for Part 1042 engines and Part 94, Category 1 engines a sample size status is displayed for the category as well. The value of this status will be either OPEN or PASS. If the value is OPEN then a message will appear indicating how many additional tests are needed across the category. Due to rounding it is possible for the sample size status for the category to be OPEN even if the sample size status for all of the engine families is PASS.

V. Troubleshooting

If odd or unexpected results are displayed in the "Summary" worksheet, the following items can be checked:

- Has a category been specified on the "Summary" worksheet and a projected production volume in the Engine Family worksheets?
- Is "Y" indicated for the "Engine Family Testing Completed?" field for each completed Engine Family tab?
- Are all engine tests entered sequentially without skipping rows?
- Is "Y" indicated within the "Calc Final Result" field for rows in which a final result is to be calculated?
- Is there any information that has been inadvertently omitted within any one of the required data fields?

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

OMB No. 2060-0641 Approval Expires on 11/30/2016 EPA Form 5900-298



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Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

facturer: est Contact: Address: e #:						Category: Projected Annu Number of Com Minimum Requi	pleted Engine F	or Category: amily Tests: ple Size For Catego	ory:	0		Model Year: Current Quarter:						
ents:													Total Production	0				
pliance Sum	mary																	
		СО			PM			NOx+HC			NOx		HC					1
ngine Family	Final Result (g/kW-hr)	Standard (g/kW- hr)	Compliance Status	Final Result (g/kW-hr)	Standard/FEL (g/kW-hr)	Compliance Status	Final Result (g/kW-hr)	Standard/FEL (g/kW-hr)	Compliance Status	Final Result (g/kW-hr)	Standard/FEL (g/kW-hr)	Compliance Status	Final Result (g/kW- hr) Standard/FEL (g/kW- hr)	Compliance Status	Sample Size Status	Test Status	Compliance Status	Number Passed: 0 Number Failed: 0
																		Number Open: 0
																		Category Sample Size Status:
							Dane	rwork Reduction	A of Notice						I			



Total Actual Production (to date):

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Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

sic Information: Engine Family #1 Engine Family: Projected Annual Production: Date of Start of Model Year Production: Date of Start of Model Year Production: Deteroration Factor Type: Include Results form Engine Family #1 on Summary Sheet? Required Tests (including failure follow-ups) Modes: Manufacturer: PLT Test Contact: Email Address: Phone #: Test Location & description: Current CO Result Current PM Result Current HC Result Final NOx Result CO Standard Units CO Det Factor Det Factor Type CO Green Engine Factor PM Standard or FEL Units PM Det Factor Det Factor Type PM Green Engine Factor HC Standard Units HC Det Factor Det Factor Type HC Green Engine Factor Carryover: Pre-approved reduced required sample size: Pre-approved reduced required sample size: Fuel Type: Recreational/Commercial: Model Year: Tier: Combined NOx+HC? 40 CFR Part: g/kW-hr g/kW-hr g/kW-hr Units NOx Det Factor Det Factor Type NOx Green Engine Factor Q1 Actual Q2 Actual Q3 Actual Q4 Actual Total 0

Part 94 - Category 2 Sample Size Status: N/A

OMB No. 2060-0641 Approval Expires on 11/30/2016 EPA Form 5900-298

- Test Cycle Options

 1 = 4-Mode General Cycle (E3)

 2 = 5-Mode Recreational Cycle (E5)

 3 = 4-Mode Constant Speed Propulsion Cycle (E2)

 4 = 5-Mode Constant Speed Availary Cycle (C2)

 5 = 6-Mode Variable Speed Auxiliary Cycle (C2)

 6 = 8-Mode Variable Speed Auxiliary Cycle (C1)

 0 = Other

g/kW-hr

PLT Engine Test Results: Engine Family #1

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												Comino																					
Calc Final						Engine	Engine		Green Engine	Green Engine Factor	C	Hours Service Acc.	CO Initial	Rounded CO	CO Final	Det. CO Final	PM Initial	Rounded PM	PM Final	Det. PM Final		Rounded HC	HC Final	Det. HC Final	NOx Initial	Rounded NOx	NOx Final	Det. NOx Final	Reason for Failed Test (if applicable)				
Result?	Test Number	Test Date	Test Time	Test Otr	Engine ID	Make	Configuration	Build Date	Factor Applied?	Method r	nies) Accumulation	Location Procedure	Result	Initial Result	Result	Result	Result	Initial Result	Result	Result	HC Initial Result	Initial Result	Result	Result	Result	Initial Result	Result	Result	applicable)	Remedy	Repairs	Test Cycle	Comments
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Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

Basic Information: Engine Family #	2							
Manufacturer: PLT Test Contact: Email Address: Phone #:		Engine Family: Projected Annual Production: Date of Start of Model Year Production: Date of End of Model Year Production:		Current CO Result	Current PM Result	Current HC Result	Final NOx Result	OMB No. 2069-0641 Approval Expires on 11/30/2016 EPA Form 5900-238
Test Location & description: Carryover?: Pre-approved reduced require Fuel Type: Recreational/Commercial: Model Year: Tier: Combined NOx+HC?	d sample size:	Deterioration Factor Type: Include Results from Engine Family #2 on Summary Sheet? Required Tests (including failure follow-ups) Notes:	1	CO Standard Units CO Det Factor Det Factor Type CO Green Engine Factor	PM Standard or FEL Units PM Det Factor Det Factor Type PM Green Engine Factor	HC Standard or FEL Units 9/KW-hr HC Det Factor Det Factor Type HC Green Engine Factor	NOX Standard or FEL Units NOX Det Factor Det Factor Type NOX Green Engine Factor	Test Cycle Options 1 = 44 Mode General Cycle (E3) 2 = 54 Mode Remeral Cycle (E3) 2 = 54 Mode Remeral Cycle (E4) 3 = 44 Mode Constant Speed Propulsion Cycle (E2) 5 = 64 Mode Cycles (E4) 5 = 64 Mode Vulside Speed Auxiliary Cycle (E2) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E2) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E2) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E2) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E2) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E2) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E2) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliary Cycle (E3) 6 = 64 Mode Vulside Speed Auxiliar
40 CFR Part:	Total Actual Production (to date):	Q1 Actual Q2 Actual Q3 Actual Q4 Actual	Total 0	Part 94 – Category 2 Sample				0 = Other

									Green Engine Factor		Service																		Reason for Failed Test (if applicable)				
Result? Tes	st Number	Test Date	Test Time	Test Qtr Engine ID	Make	Engine Configuration	Build Date	Factor Applied?	Determination Method	Service Hours (or miles) Accumulation	Location Location	Procedure	Result	Initial Result	Result	Result	PM Initial Result	Initial Result	PM Final Result	Result	HC Initial Result	Initial Result	Result	Result	Result	Initial Result	Result	Result	Reason for Failed Test (if applicable)	Remedy	Repairs	Test Cycle	Comments
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Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.



Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

																		Version Number	2.2 CHARTENAOT DE	Jeniber 2015														
Racio Inf	ormation: Eng	ino Esmily #	2																															
	Manufacturer: PLT Test Cont Email Address Phone #: Test Location Carryover?:	act: :: & description: reduced required Commercial:		Production	(to date):		Required Tests (i Notes:	fodel Year Produ odel Year Produ ctror Type: trom Engine Fam including failure	ction: nily #3 on Summar follow-ups) —		Total 0	1		CO Standard Units CO Det Factor Det Factor Typr CO Green Engli		g/kW-hr		PM Standard Units PM Det Factor Det Factor Ty PM Green Eng	r ie	g/kw-hr		Current HC Standard or Units HC Det Factor Det Factor Type HC Green Engir	FEL	g/kW-hr	1	Final N NOx Standard Units NOx Det Factor Det Factor Typ NOx Green Eng	or FEL r e	g/kW-hr					4 = 5-Mode Consta 5 = 6-Mode Variable	al Cycle (E3)
																																	_	
PLT Engi	ne Test Result	ts: Engine Fa	mily #3																															
Calc Fi Resul	nal t? Test Number	Test Date	Test Time	Test Qtr	Engine ID	Engine Make	Engine Configuration	Build Date	Green Engine Factor Applied?	Green Engine Factor Determination Method	or Service Hours (or miles) Accumulation	ervice lours S	Service Acc. Procedure	CO Initial Result	Rounded CO Initial Result	CO Final Result	Det. CO Final Result	PM Initial Result	Rounded PM Initial Result	PM Final Result	Det. PM Fina Result	I HC Initial Resul	Rounded HC t Initial Result	HC Final Result	Det. HC Final Result	NOx Initial Result	Rounded NOx Initial Result	NOx Final Result	Det. NOx Fina Result	Reason for Failed Test (if applicable)	Remedy	Repairs	Test Cycle	Comments
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Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

			Version Number: 1.1 Last Revision: December 2013			
Basic Information: Engine Family #4						
Manufacturer: PLT Tept contact: Final Address: Phone #: Test Location & description: Carpyour? Phe-approved reduced required sample size: Foul Type: Recreational/Commercial: Model Year: Ter: Collaboration WorthC? 48 CFR Part: [Total Actual Production to de	Notes: OI Actual O2 Actual O3 Actual O4 Actual Total	Convent CO Result CO Standard gaWV-hr Onts Units Of Factor Of Factor Type CO Green Engine Factor	Current PM Result PM Standard or FEL. Units Uni	Current MC Result MC Standard or FEL Units Def Sactor Def Sactor Yape MC Green Engine Factor	Final NOX Result NOX Standard or FEL. URL URL DE Factor DE Factor Type NOX Green Engline Factor	OMB No. 2006-0641 Approximations EPA Form \$900-288 Tist Code Debins 1 14-Mode Central Cycle (E3) 2 = 5-Mode Recreational Cycle (E3) 3 = 4-Mode Central Speed Propulsion Cycle (E2) 4 = 5-Mode Constant Speed Propulsion Cycle (E2) 5 = 6-Mode Variable Speed Auxiliary Cycle (C2) C = 6-Mode Variable Speed Auxiliary Cycle (C1) C = Other
Comments:		Part 94 – Category 2 Sample Size Status: N/A				

PLT Engine Test Results: Engine Family #4

										Green Engine Factor Determination Method Service Hours (or miles) Accumulatio	Service																						
Result?	Test Number	Test Date	Test Tim	e Test Qtr	Engine ID	Make Configu	ration B	Build Date	Factor Applied?	Determination Service Hours (or Method miles) Accumulatio	n Location	Procedure	Result	Initial Result	Result	Result	Result	Initial Result	Result	Result	HC Initial Result	Initial Result	Result	Result	Result	Initial Result	Result	Result	applicable)	Remedy	Repairs	Test Cycle	Comments
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The public reporting and recordiseeping burden for this collection of information is estimated to average 12 hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, as unappreciated for information are proported burden. Including though the use of automated collection techniques to the Dividency, Collection Strategies Division, U.S. Environmental Protection Agency (20227), 1200 Perinsylvata Ave., NW, Washington, D.C. 2006. Include the OMB control number in any correspondence. Do not send the completed from to this address.



Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

Basic Information: Fi	ngine Family #	5																															
Carryover? Pre-approv Fuel Type:	er: on & description: critical description:	sample size:	Engine Family: Projected Annual Production: Date of Start of Model Year Production: Date of Start of Model Year Production: Date of Start of Model Year Production: Date of End of Model Year Production: Date of End of Model Year Production: Deterioration Facility Type: Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results from Engine Family 5 on Summary Sheet? Include Results f											e e ne Factor ory 2 Sample	g/kW-hr		Current PM Standard units Units PM Det Factor Typ PM Green Eng	e	g/kW-hr		Current HC Standard or Units HC Det Factor Det Factor Typ HC Green Engli	e	gkW-hr		Final N NOx Standard of Units NOx Det Factor Det Factor Typ NOx Green Eng	or ie	g/kW-hr					4 = 5-Mode Constar 5 = 6-Mode Variable	al Cycle (E3)
PLT Engine Test Res	ulto, Engino Eo	mails: 45																															
PLT Engine Test Res	uns: Engine Fa	unily #5																															
Calc Final Result? Test Number	er Test Date	Test Time	Test Qtr I	Engine ID	Engine Make	Engine Configuration	Build Date	Green Engine Factor Applied	Green Engine Facto Determination Method	or Service Hours (or miles) Accumulation	Service Hours Location	Service Acc. Procedure	CO Initial Result	Rounded CO Initial Result	CO Final Result	Det. CO Final Result	PM Initial Result	Rounded PM Initial Result	PM Final Result	Det. PM Final Result	HC Initial Resu	Rounded HC Initial Result	HC Final Result	Det. HC Final Result	NOx Initial Result	Rounded NOx Initial Result	NOx Final Result	Det. NOx Final Result	Reason for Failed Test (if applicable)	Remedy	Repairs	Test Cycle	Comments
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Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

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Degie Info	mantinu. Eu	ngine Family #6																													_	
Basic Info	Manufacture PLT Test Co Email Addre	er: ontact:			Engine Family Projected Ann	r: nual Production: of Model Year Produ						Current	CO Result]	Currer	nt PM Result			Current	HC Result			Final N	Ox Result						ſ	OMB No. 2060-0641 Approval Expires on 11/30/2016
	Phone #:	on & description:			Date of End of	Model Year Produc	iction:																									11/30/2016 EPA Form 5900-298
	Carryover?: Pre-approve Fuel Type:	ed reduced required	Include Results from Engine Family #6 on Summary Sheet? CO Standa										e	g/kW-hr		PM Standard Units PM Det Facto Det Factor Ty PM Green En	or pe	g/kW-hr		HC Standard or Units HC Det Factor Det Factor Type HC Green Engli	e	g/kW-hr	U N	IOx Standard of Inits IOx Det Facto Det Factor Type IOx Green Eng	r e	g/kW-hr					4 = 5-Mode Consta 5 = 6-Mode Variable	à Cycle (E3) ional Cycle (E5) it Speed Propulsion Cycle (E2) it Speed Auxiliary Cycle (D2) Speed Auxiliary Cycle (G2) Speed Auxiliary Cycle (C1)
	Comments:			Production (to date):				0]	Part 94 – Categ Size Status:	ory 2 Sample	N/A																		
PLT Engin	e Test Resu	ults: Engine Fa	mily #6																													
Calc Fina	al Test Number	r Test Date	Test Time	Test Otr Engine	Engine Engine ID Make Configuration	n Build Date	Green Engine Factor Applied?	Green Engine Facto	Service Hours (or	Service Hours	Service Acc.	CO Initial	Rounded CO	CO Final Result	Det. CO Final Result	PM Initial Result	Rounded PM Initial Result	PM Final Result	Det. PM Final	HC Initial Resul	Rounded HC	HC Final Result	Det. HC Final Result	NOx Initial Result	Rounded NOx Initial Result	NOx Final I	Det. NOx Final Result	Reason for Failed Test (if applicable)	Remedy	Repairs	Test Cycle	Comments
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We will will be approved the Decision of the compensation to this address.



Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

Danie Infor	mation. Enc	gine Family #	7																													
Dasic IIIIOI	mation: Eng	gine Family #	4																													
	Manufacturer	r				Engine Family								_	7										NOx Result		,					OMB No. 2060-0641
	PLT Test Con					Projected Ann	ual Production:					Curre	nt CO Result		╛	Curre	nt PM Result			Current I	HC Result		J L	Final N	NOx Result							Approval Expires on
	Email Address	is:					f Model Year Produ																									11/30/2016
	Phone #:						Model Year Produc	ction:																								EPA Form 5900-298
	Test Location	n & description:				Deterioration I																										
						Include Result	s from Engine Fam	ilv #7 on Summar	v Sheet?			CO Standa	rd		7	PM Standard	d or FEL		1	HC Standard or	FEL]	NOx Standard	or FEL							
	Carryover?:					Required Test	s (including failure	follow-ups)			1	Units		g/kW-hr	1	Units		g/kW-hr	1	Units		g/kW-hr	1 1	Units		g/kW-hr					Test Cycle Option 1 = 4-Mode General	9
	Pre-approved	reduced required	f sample size:	-		Notes:	- (CO Det Fac	tor			PM Det Facto	or	g		HC Det Factor		B	1	NOx Det Facto	or	g					1 = 4-Mode Gener	I Cycle (E3)
	Fuel Type:				_			_				Det Factor				Det Factor Ty				Det Factor Type				Det Factor Typ							2 = 5-Mode Recrea	tional Cycle (F5)
	Recreational/	Commoroial		-	_							CO Croon E	ngine Factor		+	PM Green En	gino Footor			HC Green Engin	o Footor		1	NOx Green En	gino Footor						2 = 4 Mode Const	nt Speed Propulsion Cycle (E2)
	Model Year:	Commercial.		-								CO Green E	ilgilie Pactoi		_	FM Gleen En	igine ractor		J	no Green Engin	ie ractoi			NOX GIEER EN	gille Pactor		l				4 - 5 Made Const	nt Speed Auxiliary Cycle (D2)
	Tier:			-	_																										4 = 5-Mode Const	e Speed Auxiliary Cycle (G2)
	Tier:			-																											5 = 6-Mode Variab	e Speed Auxiliary Cycle (G2)
	Combined NC	Dx+HC?																													6 = 8-Mode Variab	e Speed Ausiliary Cycle (C1)
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						Q1 Actual	Q2 Actual	Q3 Actual	Q4 Actual	Total																						
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Docult2	Test Number	Test Date	Toot Time	Toot Ote	Engine ID	ngine Engine fake Configuration	n Build Data	Footor Applied	Determination	Service Hours (or	cation Proced		Initial Result	CO Final Result	Det. CO Final	Pocult	Initial Result	Popult	Det. FM Fillal	HC Initial Result	t Initial Beaut	Popult	Det. HC Final Result	Docult	Initial Result	Result	Result	applicable)	Remedy	Repairs	Test Cycle	Comments
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				- All											Version Number	r: 1.1 Last Revision: Dec	cember 2013			•											
Basic Infor	mation: En	gine Family #8																													
	Manufacturer PLT Test Cor Email Addres Phone #: Test Location Carryover?:	or: Intact: In	sample size:	I Production (to date)	Date of Star Date of End Deterioratio Include Res Required Te Notes:	nnual Production: of Model Year Prod of Model Year Prod n Factor Type: ults from Engine Fa sts (including failur	uction: mily #8 on Summary Sheet?	Total 0	1]	CO Standard Units CO Det Facto Det Factor Tyj CO Green Eng	r pe	g/kW-hr		PM Standard Units PM Det Factor Det Factor PM Green Eng	or pe	g/kW-hr		Current I HC Standard or I Units HC Det Factor Det Factor Type HC Green Engin		g/kW-hr		Final N NOX Standard Units NOX Det Factor Typ NOX Green Eng	or oe	g/kW-hr					4 = 5-Mode Consta 5 = 6-Mode Variable	OMB No. 2060-0641 Approval Expires on 11/13/2016 EPA Form 5900-298 a Cycle (E3) Books Cycle (E5) Books Cycle (E5) ES peed Ausiliary Cycle (C2) ES peed Ausiliary Cycle (C1)
DI T Evvila	Test Deep	ılts: Engine Fa	miller #0							•																					
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Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

Rasic Infor	mation: En	gine Family #9																														
- Maile Inite	The second second	gine running #5																														
	Manufacture	_			Engine Far	-16					7																					OMB No. 2060-0641
	PLT Test Cor	:r:			Engine Far	Annual Production:							CO Result		1		t PM Result				HC Result		_	Floral No.	Ox Result							Approval Expires on
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	Phone #:	ss:			Date of Sta	of Model Year Pro	oduction:				-																					EPA Form 5900-298
	Phone #:		_		Date of End	of Model Year Proc	duction:																									EPA Form 5900-298
	Test Location	n & description:			Deterioration	on Factor Type:					4				,																	
					Include Re	sults from Engine F	amily #9 on Summar	ry Sheet?				CO Standard				PM Standard	or FEL			HC Standard or	FEL		NO	x Standard o	or FEL							
	Carryover?:				Required T	ests (including failu	ure follow-ups)			1		Units		g/kW-hr		Units		g/kW-hr		Units		g/kW-hr		its		g/kW-hr					Test Cycle Option	<u>s</u>
	Pre-approved	d reduced required s	sample size:		Notes:							CO Det Factor				PM Det Facto				HC Det Factor			NO	x Det Factor	r						1 = 4-Mode Genera	il Cycle (E3)
	Fuel Type:											Det Factor Type	e			Det Factor Typ	pe			Det Factor Type	•		Del	t Factor Type							2 = 5-Mode Recrea	tional Cycle (E5)
	Recreational	l/Commercial:										CO Green Engi	ne Factor]	PM Green Eng	jine Factor			HC Green Engin	ne Factor		NO	x Green Eng	ine Factor						3 = 4-Mode Consta	nt Speed Propulsion Cycle (E2)
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We will will be approved the Decision of the compensation to this address.



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Basic Inf	Manufacture PLT Test Co Email Addre Phone #: Test Locatio Carryover?: Pre-approve Fuel Type:	on & description: ed reduced required : el/Commercial: EOX+HC?	10				Engine Family: Projected Annual Date of Start of Mo Deterioration Fast Include Results Required Tests (in Notes: Q1 Actual	odel Year Product del Year Product or Yepe: om Engine Family icluding failure fo	tion: ly #10 on Summar ollow-ups) —	y Sheet? Q4 Actual Total 0		CO Stat Units CO Det Det Fac CO Gree	Factor or Type or Engine Factor	r g	ikW-hr	Ph Ur Ph De		PM Result r FEL			Current HC Resul HC Standard or FEL Units HC Det Factor Det Factor Det Factor Toget Factor HC Green Engline Factor	9/	kw-tr	NOx Standa Units NOx Det Fa Det Factor 1	ctor	g/kw-hr					4 = 5-Mode Constar 5 = 6-Mode Variable	il Cycle (E3)
PLT Engi	ne Test Resu	ults: Engine Fa	amily #10									Size Sta	us:	N/A																		
Calc Fi Resul	nal t? Test Number	r Test Date	Test Time	e Test Qtr	Engine ID	Engine Make	Engine Configuration	Build Date	Green Engine Factor Applied	Green Engine Factor Determination Method Service Hours (o	Service Hours Serv Location Pro	vice Acc. CO In ocedure Res	tial Round It Initial F	ed CO Ci tesult F	O Final Det Result	t. CO Final Result	PM Initial Result	Rounded PM Initial Result	PM Final Result	Det. PM Final Result	Round HC Initial Result Initial	led HC HC Result R	Final Det. He	Final NOx Initia	Rounded NOx Initial Result	NOx Final Result	Det. NOx Fina Result	Reason for Failed Test (if applicable)	Remedy	Repairs	Test Cycle	Comments
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Paperwork Reduction Act Notice

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Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

																		Version Number	: 1.1 Last Revision: Deco	ember 2013														
Racio Inf	ormation: En	gine Family #1	11																															
	Manufacture PLT Test Co Email Addre Phone #: Test Locatio Carryover?: Pre-approve Fuel Type: Recreational Model Year: Tier: Combined N 40 CFR Part: Comments:	r. ntact: ss: n & description: d reduced required //Commercial: Ox+HC?	sample size:		(to date):	Projec Date o Date o Deteric Includ Requir Notes:	f End of Mod oration Facto e Results fro red Tests (ind	odel Year Product del Year Product or Yepe: om Engine Famil occluding failure fo	tion: ly #11 on Summa ollow-ups) –		Total 0	1		Current CO Standard Units CO Det Factor Det Factor Typ CO Green Engi Part 94 - Cate Size Status:	e ne Factor ory 2 Sample	g/kW-hr		PM Standard Units PM Det Factor Det Factor Ty PM Green Eng	or pe	gkW-hr		Current HC Standard or Units HC Det Factor Det Factor Type HC Green Engli	FEL	g/kW-hr		Final N NOx Standard Units NOX Det Facto Det Factor Typ NOX Green En	or oe	g/kW-hr					4 = 5-Mode Consta 5 = 6-Mode Variabl	al Cycle (E3)
DI T Engi	ne Test Pesi	Ilts: Engine Fa	mily #11																															
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Calc Fi	nal t? Test Number	Test Date	Test Time	Test Otr F	ngine ID	Engine E	Engine figuration	Build Date	Green Engine	Green Engine Factor	Service Hours (or miles) Accumulation	Service Hours Location	Service Acc.	CO Initial Result	Rounded CO	CO Final Result	Det. CO Final Result	PM Initial Result	Rounded PM Initial Result	PM Final Result	Det. PM Fina Result	I HC Initial Resul	Rounded HC	HC Final Result	Det. HC Final Result	NOx Initial Result	Rounded NOx Initial Result	NOx Final Result	Det. NOx Final	Reason for Failed Test (if applicable)	Remedy	Repairs	Test Cycle	Comments
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Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

sic Information: Engine Family #12 Manufacturer: PLT Test Contact: Email Address: Phone #: Test Location & description:

Engine Family:
Projected Annual ProductionProjected Annual ProductionDate of End of Model Year ProductionDate of End of Model Year ProductionDeterioration Factor Type:
Chicuke Results from Engine Family 912 on Summary Sheet?
Required Tests (including failure follow-ups)
Notes: Carryover?:
Pre-approved reduced required sample size:
Fuel Type:
Recreational/Commercial:
Model Year:
Tier:
Combined NOx+HC?
40 CFR Part:

Q1 Actual Q2 Actual Q3 Actual Q4 Actual Total 0 Total Actual Production (to date):

Part 94 - Category 2 Sample Size Status: N/A

Current PM Result Current HC Result Final NOx Result

CO Standard Units CO Det Factor Det Factor Type CO Green Engine Factor HC Standard or FEL g/kW-hr g/kW-hr

PM Standard or FEL Units PM Det Factor Det Factor Type PM Green Engine Factor g/kW-hr Units
HC Det Factor
Det Factor Type
HC Green Engine Factor

NOx Standard or FEL Units
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NOx Green Engine Factor

g/kW-hr

OMB No. 2060-0641 Approval Expires on 11/30/2016 EPA Form 5900-298

Test Cycle Options

1 = 4-Mode General Cycle (E3)

2 = 5-Mode Recreational Cycle (E5)

3 = 4-Mode Constant Speed Propulsion Cycle (E2)

4 = 5-Mode Constant Speed Auxiliary Cycle (D2)

5 = 6-Mode Variable Speed Auxiliary Cycle (C2)

6 = 8-Mode Variable Speed Auxiliary Cycle (C1)

0 = Other

PLT Engine Test Results: Engine Family #12

Comments:

										Service																						
Calc Final					Eng	ne Engine		Green Engine	Green Engine Factor Determination	Service Hours (or Hours miles) Accumulation	Service Acc.	CO Initial	Rounded CO	CO Final	Det. CO Final	PM Initial	Rounded PM	PM Final	Det. PM Final		Rounded HC	HC Final	Det. HC Final	NOx Initial	Rounded NOx	NOx Final Det.	NOx Final	Reason for Failed Test (if				
Result?	Test Number	Test Date	Test Time T	est Qtr Eng	ine ID Ma	ce Configuratio	n Build Date	Factor Applied?	Method	miles) Accumulation Location	Procedure	Result	Initial Result	Result	Result	Result	Initial Result	Result	Result	HC Initial Result	Initial Result	Result	Result	Result	Initial Result	Result	Result	applicable)	Remedy	Repairs	Test Cycle	Comments
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Persinyalnan Ave. (A.W. Washington, C.D. 2046). Include the OMB control number on any consequence. Do not send the completed from to this address.



Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

																	version Number:	1.1 Last Revision: De	cember 2013														
Basic Info	rmation: End	ine Family #1	3																														
	Manufacturer: PLT Test Con Email Addres: Phone #: Test Location Carryover?:	tact: s: a & description: reduced required s Commercial:		I Production		Date of End of M Deterioration Far Include Results I Required Tests (Notes:	al Production: Model Year Produc Iodel Year Produc ctor Type:	ition: ily #13 on Summai follow-ups) —		Total 0	1		Current CO Standard Units CO Det Factor Ty CO Green Eng	r De Jine Factor	g/kW-hr		Curren PM Standard Units PM Det Facto Det Factor Tyj PM Green Eng	r oe	g/kW-hr		Current H HC Standard or F Units HC Det Factor Det Factor Type HC Green Engine	EL	g/kW-hr		Final N NOx Standard Units NOx Det Factor Det Factor Typ NOx Green Eng	e	g/kW-hr					4 = 5-Mode Consta 5 = 6-Mode Variabl	OMB No. 2060-0641 Approval Expires on 11/30/2005 EPA Form 5900-258 13 Cycle (E3) 14 Cycle (E3) 15 Cycle (E4) 15 Speed Ausdiany Cycle (E2) 16 Cycle (E4) 16 Speed Ausdiany Cycle (E2) 17 Speed Ausdiany Cycle (E2) 18 Speed Ausdiany Cycle (E2)
PLT Engin	e Test Resul	lts: Engine Far	mily #13																														
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Result?	Test Number	Test Date	Test Time	Test Qtr	Engine ID Make	Configuration	Build Date	Factor Applied	P Determination Method	Service Hours (or miles) Accumulation	n Location	Procedure	Result	Initial Result	Result	Result	Result	Initial Result	Result	Result	HC Initial Result	Initial Result	Result	Result	Result	Initial Result	Result	Result	applicable)	Remedy	Repairs	Test Cycle	Comments
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Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

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Donie Infe	mation. En	gino Comile #1	4																												
	Manufacture PLT Test Co Email Addres Phone #: Test Location Carryover?: Pre-approvec Fuel Type: Recreational Model Year: Tier: Combined NX 40 CFR Part: Comments:	ntact: ss: n & description: d reduced required : I/Commercial: Ox+HC?	Sample size:	al Production (to di		Engine Family: Projected Annua Pate of Start Annua Date of Start No Date of End of M Deterioration Deterioration Sea Include Results f Required Tests (i Notes:	Model Year Produc lodel Year Produc ctor Type: from Engine Fami lincluding failure f	tion: ly #14 on Summa follow-ups) —		Total 0	1	CO Standard Units CO Det Factor Det Factor Ty CO Green Eng	r pe	g/kW-hr	1		or FEL	g/kW-hr		Current I HC Standard or Units HC Det Factor Det Factor Type HC Green Engin	FEL	g/kW-hr		Final NV NOX Standard of Units NOX Det Factor Det Factor Type NOX Green Engi	r FEL	g/kW-hr				4 = 5-Mode Consta 5 = 6-Mode Variable	OMB No. 2060-0641 Approval Expires on 11/30/2016 EPA Form 5900-298 IS Ocycle (E3) II Cycle (E3) II Cycle (E5) II Speed Audilary Cycle (C2) II Speed Audilary Cycle (C2) Speed Audilary Cycle (C2)
PLT Engin	e Test Resu	ılts: Engine Fa	mily #14																												
Calc Fina Result?	al Test Number	r Test Date	Test Time	e Test Qtr Engin	Engine e ID Make	Engine Configuration	Build Date	Green Engine Factor Applied	Green Engine Facto Determination Method	Service Hours (or miles) Accumulation	Service Hours Service Acc. Location Procedure	. CO Initial Result	Rounded CO Initial Result	CO Final Result	Det. CO Final Result	PM Initial Result	Rounded PM Initial Result	PM Final Result	Det. PM Fina Result	HC Initial Result	Rounded HC Initial Result	HC Final Result	Det. HC Final Result	NOx Initial Result	Rounded NOx Initial Result	NOx Final Result Result	Reason for Failed Test (if applicable)	Remedy	Repairs	Test Cycle	Comments
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Basic Info	rmation: Eng	ine Family #1	.5																														
	Manufacturer: PLT Test Con Email Address Phone #: Test Location	tact:				Engine Family: Projected Annual Date of Start of M Date of End of Mo Deterioration Fac	Model Year Produ					ı	Current	CO Result]	Currer	nt PM Result]	Current I	HC Result		1	Final I	NOx Result]					OMB No. 2060- Approval Expire: 11/30/2016 EPA Form 5900
	Carryover?:	reduced required :	sample size:	etion (to data)		Include Results f Required Tests (i Notes:	from Éngine Fam including failure	e follow-ups) —	mary Sheet?	Total	1		CO Standard Units CO Det Factor Det Factor Typ CO Green Eng	e	g/kW-hr		PM Standard Units PM Det Facto Det Factor Ty PM Green Eng	or pe	g/kW-hr		HC Standard or Units HC Det Factor Det Factor Type HC Green Engin		g/kW-hr		NOx Standard Units NOx Det Fact Det Factor Typ NOx Green En	or ie	g/kW-hr					4 = 5-Mode Consta 5 = 6-Mode Variable	al Cycle (E3)
PLT Engin	Comments:	ts: Engine Fa		ction (to date)						0			Part 94 – Cate Size Status:	gory 2 Sample	N/A																		
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Calc Fina Result?	al Test Number	Test Date	Test Time Test 0	Qtr Engine IE	Engine Make	Engine Configuration	Build Date	Green Engin Factor Applie	Green Engine Factor Determination Method	Service Hours (or miles) Accumulation	Hours Location	Service Acc. Procedure	CO Initial Result	Rounded CO Initial Result	CO Final Result	Det. CO Final Result	PM Initial Result	Rounded PM Initial Result	PM Final Result	Det. PM Final Result	HC Initial Result	Rounded HC Initial Result	HC Final Result	Det. HC Final Result	NOx Initial Result	Rounded NOx Initial Result	NOx Final Result	Det. NOx Fine Result	al Reason for Failed Test (if applicable)	Remedy	Repairs	Test Cycle	Comments
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Ave., NW, Was	shington, I	D.C. 20460.	Include the	OMB control number	er in any correspon	dence. Do not ser	nd the completed f	orm to this address	3.						1



Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

				NO.													Version Number	r: 1.1 Last Revision: Dece	ember 2013		<u> </u>	<u> </u>											
Rasic Info	rmation: En	gine Family #1	16																														
	Manufacture PLT Test Co Email Addre Phone #: Test Locatio Carryover?: Pre-approve Fuel Type:	er: Intact: In	sample size:	Il Production (to da	Projo Date Date Deter Incl Req Note	te of End of Mo terioration Fact clude Results fr quired Tests (ir tes:	lodel Year Product odel Year Product tor Type: rom Engine Famil ncluding failure f	tion: ily #16 on Summa		Total 0	1		Current: CO Standard Units CO Det Factor Det Factor Typ CO Green Engli Part 94 - Categ Size Status:	e	g/kW-hr		Currer PM Standard Units PM Det Factor Det Factor Ty PM Green Eng	or pe	g/kW-hr		Current HC Standard or Units HC Det Factor Type HC Green Engli	FEL	g/kW-hr	! !	Final N NOx Standard of Units NOx Det Factor Det Factor Typ NOx Green Eng	or FEL ir e	g/kW-hr					4 = 5-Mode Consta 5 = 6-Mode Variabl	OMB No. 2050-0541 Approval Expires on 11/13/07016 EPA Form 5900-298 18 al Cycle (E3) al Cycle (E5) attorned to the control of
PLT Engir	e Test Resu	ults: Engine Fa	mily #16																														
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Calc Fin	al P Test Number	r Test Date	Test Time	Test Qtr Engine	Engine te ID Make C	Engine Configuration	Build Date	Green Engine Factor Applied?	Green Engine Factor Determination Method	or Service Hours (o miles) Accumulation	Service Hours Location	Service Acc. Procedure	CO Initial Result	Rounded CO Initial Result	CO Final Result	Det. CO Final Result	PM Initial Result	Rounded PM Initial Result	PM Final Result	Det. PM Fina Result	HC Initial Resul	Rounded HC t Initial Result	HC Final Result	Det. HC Final Result	NOx Initial Result	Rounded NOx Initial Result	NOx Final I	Det. NOx Final Result	Reason for Failed Test (if applicable)	Remedy	Repairs	Test Cycle	Comments
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Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

Manufacturer: PLT Test Contact: Email Address: Phone #: Test Location & description: Carryover?: Prespipowed reduced required sa experienced for the second	mple size:		Engine Family: Projected Annual Date of Start of M Date of End of Mo Deterioration Fact Include Results fr Required Tests (in Notes:	odel Year Product del Year Product or Yepe: om Engine Family occluding failure fo	ion: y #17 on Summar ollow-ups)			1
			Q1 Actual	Q2 Actual	Q3 Actual	Q4 Actual	Total	
	Total Actual Production (to d	ite):					0	

Current CO Result Current PM Result Current HC Result Final NOx Result

g/kW-hr

PM Standard or FEL Units PM Det Factor Det Factor Type PM Green Engine Factor CO Standard g/kW-hr Units
CO Det Factor
Det Factor Type
CO Green Engine Factor

Part 94 - Category 2 Sample Size Status: N/A

NOx Standard or FEL g/kW-hr Units
HC Det Factor
Det Factor Type
HC Green Engine Factor NOX Standard of FEL Units NOX Det Factor Det Factor Type NOX Green Engine Factor

g/kW-hr

Test Cycle Options

1 = 4-Mode General Cycle (E3)

2 = 5-Mode Represational Cycle (E5)

3 = 4-Mode Constant Speed Propulsion Cycle (E2)

5 = 6-Mode Variable Speed Auxiliary Cycle (D2)

5 = 6-Mode Variable Speed Auxiliary Cycle (C2)

0 = 0-More Variable Speed Auxiliary Cycle (C1)

Engine	rest Resu	ts: Engine F	amily #17																														
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								1	Green Engine Facto	or	Service																		Reason for Failed Test (if applicable)				/
IC FINAL	Toot Number	Toot Date	Toot Time	Toot Otr Engine	Engine	Configuration	Build Date	Green Engine	Determination	Service Hours (or	Hours	Service Acc.	CO Initial	Rounded CO	CO Final	Det. CO Final	PM Initial	Rounded PM	PM Final	Det. PM Fina	UC Initial Beauty	Rounded HC	HC Final	Det. HC Final	NOx Initial	Rounded NOx	NOX Final	Det. NOx Final	Reason for Failed Test (if	Remedy	Repairs	Test Cycle	Commen
suit?	Test Number	Test Date	rest rime	rest Qtr Engine	ID Make	Configuration	Build Date	Factor Applied	Method	miles) Accumulation	Location	Procedure	Result	initial Result	Result	Result	Result	initiai Result	Result	Result	HC Initial Result	initial Result	Result	Result	Result	initiai Result	Result	Result	аррисавіе)	Remedy	Repairs	Test Cycle	Comme
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Paperwork Reduction Act Notice
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Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

Basic I	nformatio	n: Engi	ne Family #	18																														
	PLT T Email Phon Test L Carry Pre-aj Fuel T Recre Mode Tier: Comb	Location & /over?: /operseational/Co el Year: bined NOx- FR Part:	act: description: educed required	Total Actua	il Production	n (to date):		Engine Family: Projected Annual Product Projected Annual Product Official of Model Ye Detaile of English of Model Ye Detection of Mo	ear Productio ar Productio ie: gine Family ing failure foll	on: #18 on Summai llow-ups)	ry Sheet? Q4 Actual Total 0		1	CO Standard Units CO Det Factor Det Factor Typ CO Green Eng	e ne Factor	g/kW-hr		PM Standard Units PM Det Factor Ty PM Green En	r pe	g/kW-hr		HC Standard or Units HC Det Factor Det Factor Type HC Green Engin		g/kW-hr		Final NC NOx Standard o Units NOx Det Factor Det Factor Type NOx Green Engli		gitw-tv					4 = 5-Mode Constan 5 = 6-Mode Variable	Cycle (E3)
PLT En	gine Test	Results	s: Engine Fa	amily #18																														
Cole	Final						Engine	Engine		Green Engine	Green Engine Factor	Se	Hours Service Acc.	CO Initial	Pounded CO	CO Einel	Det. CO Final	DM Initial	Pounded PM	DM Cinal	Det DM Einel		Pounded MC	HC Final	Det HC Einel	NOv Initial	Rounded NOx	NOx Final Det. NOx	Cinal Dec	seon for Eailed Test (if				
Re	sult? Test N	Number	Test Date	Test Time	Test Qtr	Engine ID	Make	Engine Configuration Bui	ild Date F	Factor Applied?	Determination Service Hour miles) Accume	rs (or ulation LO	ocation Procedure	Result	Rounded CO Initial Result	Result	Result	Result	Rounded PM Initial Result	Result	Result	HC Initial Result	Initial Result	Result	Result	Result	Initial Result	Result Resul	ilt	applicable)	Remedy	Repairs	Test Cycle	Comments
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United States US Environmental Protection Agency Office of Air and Radiation, Office of Transportation and Air Quality

Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

sasic information: Engine Family #19											
Manufacturer:		Engine Family:									
PLT Test Contact:		Projected Annual Production:		Current CO Result		Current PM Result		Current HC Result		Final NOx Result	
Email Address:		Date of Start of Model Year Production:						· · · · · · · · · · · · · · · · · · ·			
Phone #:		Date of End of Model Year Production:									
Test Location & description:		Deterioration Factor Type:									
		Include Results from Engine Family #19 on Summary Sheet?		CO Standard		PM Standard or FEL		HC Standard or FEL		NOx Standard or FEL	
Carryover?:		Required Tests (including failure follow-ups)	1	Units	g/kW-hr	Units	g/kW-hr	Units	g/kW-hr	Units	g/kW-hr
Pre-approved reduced required sa	mple size:	Notes:	· · · · · · · · · · · · · · · · · · ·	CO Det Factor		PM Det Factor		HC Det Factor		NOx Det Factor	
Fuel Type:				Det Factor Type		Det Factor Type		Det Factor Type		Det Factor Type	
Recreational/Commercial:				CO Green Engine Factor		PM Green Engine Factor		HC Green Engine Factor		NOx Green Engine Factor	
Model Year:											
Tier:											
Combined NOx+HC?											
40 CFR Part:											

Part 94 - Category 2 Sample Size Status: N/A

Test Cycle Options

1 = 4-Mode General Cycle (E3)

2 = 5-Mode Reversational Cycle (E5)

3 = 4-Mode Constant Speed Propulsion Cycle (E2)

5 = 5-Mode Constant Speed Auxiliary Cycle (D2)

5 = 6-Mode Variable Speed Auxiliary Cycle (C2)

6 = 8-Mode Variable Speed Auxiliary Cycle (C1)

O = Other

PLT Engine Test Results: Engine Family #19

		nor Engine ra																															
											Service																						
Calc Final	Test Number	Teet Date	Test Time	Test Otr	Engine ID	Engine Make	Engine	Ruild Date	Green Engine	Green Engine Factor Determination	Service Hours (or Hours	Service Ad	c. CO Initial	Rounded CO	CO Final	Det. CO Final	PM Initial	Rounded PM	PM Final	Det. PM Final	MC Initial Pacult	Rounded HC	HC Final	Det. HC Final	NOx Initial	Rounded NOx	NOx Final	Det. NOx Final	Reason for Failed Test (if applicable)	Remedy	Repairs	Test Cycle	Comments
resur.	rest itumber	rest bute	rest time	rest Qui	Linginic ID	munc	Comgulation	Duna Date	ractor Applica.	meanou	inica) Accumulation Cocure	11000000	Result	minum result	resur	resun	resur	minum recount	resur	resur	no mua resur	minum recount	resun	resur	resur	minum result	resur	resur	иррисцогсу	remedy	перинэ	rest cycle	Comments
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Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

			PROTE													Version Number:	1.1 Last Revision: Der	ember 2013	•												
Dogie Inf	rmotion. Enc	ina Family #2	0																												
Basic Info	Manufacturer: PLT Test Con Email Addres: Phone #: Test Location Carryover?: Pre-approved	act:			Date of Start Date of End Deterioration Include Resi	ly: nual Production: of Model Year Prod of Model Year Prod Factor Type: Its from Engine Fa sts (including failui	luction: amily #20 on Sumn	mary Sheet?		1]	CO Standard Units CO Det Factor	,	g/kW-hr		PM Standard (Units PM Det Factor	r	g/kW-hr	HC Standar Units HC Det Faci		g/kW-hr		NOx Standard Units NOx Det Facto	or	g/kW-hr					Test Cycle Options 1 = 4-Mode General	Cycle (E3)
	Fuel Type: Recreational/o Model Year: Tier: Combined NO 40 CFR Part:	x+HC?	Total Actual Produ	ection (to date):	Q1 Actu	ıl Q2 Actual	I Q3 Actual	Q4 Actual	Total 0	3		Det Factor Typ CO Green Eng	e ine Factor			Det Factor Typ PM Green Eng	oe line Factor		Det Factor HC Green E				Det Factor Typ NOx Green En	e gine Factor]				4 = 5-Mode Constar 5 = 6-Mode Variable	onal Cycle (E5) t Speed Propulsion Cycle (E2) t Speed Auxiliary Cycle (D2) Speed Auxiliary Cycle (G2) Speed Auxiliary Cycle (C1)
	Comments:											Part 94 - Cate Size Status:	gory 2 Sample	N/A																	
PLT Engi	ne Test Resul	ts: Engine Far	nily #20																												
PLT Engi	ne Test Resul	ts: Engine Far	nily #20																												
Calc Fi				Qtr Engine ID	Engine Engine Make Configurat	ion Build Date	Green Engin Factor Applie	ne Green Engine Fac Determination ed?	sctor n Service Hours (or miles) Accumulation	Service Hours Location	Service Acc.	CO Initial Result	Rounded CO Initial Result	CO Final Result	Det. CO Final Result	PM Initial Result	Rounded PM Initial Result	PM Final Det. P	M Final sult HC Initial R	Rounded HC Initial Result	HC Final Result	Det. HC Final Result	NOx Initial Result	Rounded NOx Initial Result	NOx Final Result		l Reason for Failed Test (if applicable)	Remedy	Repairs	Test Cycle	Comments
Calc Fi	nal			Qtr Engine ID	Engine Engine Make Configurat	ion Build Date	Green Engin e Factor Applie	Green Engine Fac Determination Method	n Service Hours (or miles) Accumulation	Service Hours Location	Service Acc. Procedure	CO Initial Result	Rounded CO Initial Result	CO Final Result	Det. CO Final Result	PM Initial Result	Rounded PM Initial Result	PM Final Det. P Result Re	M Final sult HC Initial R	Rounded HC esult Initial Result	HC Final Result	Det. HC Final Result	NOx Initial Result	Rounded NOx Initial Result				Remedy	Repairs	Test Cycle	Comments
Calc Fi	nal			Qtr Engine ID	Engine Engine Make Configurat	ion Build Date	Green Engin e Factor Applie	Green Engine Fac Determination Method	sctor n Service Hours (or miles) Accumulation	Service Hours Location	Service Acc. Procedure	CO Initial Result	Rounded CO Initial Result	CO Final Result	Det. CO Final Result	PM Initial Result	Rounded PM Initial Result	PM Final Det. P Result Re	M Final sult HC Initial R	Rounded HC Initial Result	HC Final Result	Det. HC Final Result	NOx Initial Result	Rounded NOx Initial Result				Remedy	Repairs	Test Cycle	Comments
Calc Fi	nal			Qtr Engine ID	Engine Engine Make Configurat	ion Build Date	Green Engin e Factor Applier	Green Engine Face Determination Method	sctor n Service Hours (or miles) Accumulation	Service Hours Location	Service Acc. Procedure	CO Initial Result	Rounded CO Initial Result	CO Final Result	Det. CO Final Result	PM Initial Result	Rounded PM Initial Result	PM Final Det. P Result Re	M Final Bult HC Initial R	Rounded HC Pounded HC Initial Result	HC Final Result	Det. HC Final Result	NOx Initial Result	Rounded NOx Initial Result				Remedy	Repairs	Test Cycle	Comments
Calc Fi	nal			Qtr Engine ID	Engine Engine Make Configurat	Build Date	Green Engin e Factor Applie	ne Green Engine Fac Determination Method	Service Hours (or miles) Accumulation	Service Hours Location	Service Acc. Procedure	CO Initial Result	Rounded CO Initial Result	CO Final Result	Det. CO Final Result	PM Initial Result	Rounded PM Initial Result	PM Final Det. P	M Final HC Initial R	Rounded HC Initial Result	HC Final Result	Det. HC Final Result	NOx Initial Result	Rounded NOx Initial Result				Remedy	Repairs	Test Cycle	Comments
Calc Fi	nal			Qtr Engine ID	Engine Engine Make Configurat	ion Build Date	Green Engin Factor Applier	Green Engine Fac Determination Method	ctor n Service Hours (or miles) Accumulation	Service Hours Location	Service Acc. Procedure	CO Initial Result	Rounded CO Initial Result	CO Final Result	Det. CO Final Result	PM Initial Result	Rounded PM Initial Result	PM Final Det. P Result Re	M Final sult HC Initial R	Rounded HC Initial Result	HC Final Result	Det. HC Final Result	NOx Initial Result	Rounded NOx Initial Result				Remedy	Repairs	Test Cycle	Comments
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Calc Fi	nal			Qtr Engine ID	Engine Engine Make Configurat	Build Date	Green Engin Factor Applier	Green Engine Fac Determination Method	Service Hours (or miles) Accumulation	Service Hours Location	Service Acc. Procedure	CO initial Result	Rounded CO Initial Result	CO Final Result	Det. CO Final Result	PM initial Result	Rounded PM Initial Result	PM Final Result Re	M Final HC Initial R	Rounded HC Initial Result	HC Final Result	Det. HC Final Result	NOx initial Result	Rounded NOx Initial Result				Remedy	Repairs	Test Cycle	Comments
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Calc Fi	nal			Qtr Engine ID	Engine Engine Make Configurat	Build Date	Green Engin	Green Engine Face Determination Method in	Service Hours (or miles) Accumulation	Service Hours In Location	Service Acc. Procedure	CO Initial Result	Rounded CO Initial Result	CO Final Result	Det. CO Final Result	PM Initial Result	Rounded PM Initial Result	PM Final Result Re-	M Final HC Initial R	Rounded HC Initial Result	HC Final Result	Det. HC Final Result	NOx initial Result	Rounded NOx initial Result				Remedy	Repairs	Test Cycle	Comments
Calc Fi	nal			Qtr Engine ID	Engine Engine Make Configuration	Build Date	Green Engin	Green Engine Fac Determination Method	sctor Service Hours (or enter) Xecumulation	Service Hours In Location	Service Acc. Procedure	CO Initial Result	Rounded CO Initial Result	CO Final Result	Det. CO Final Result	PM Initial Result	Rounded PM Initial Result	PM Final Det. Result Re	M Final HC Initial R	Rounded HC Initial Result	HC Final Result	Det HC Final Result	NOx initial Result	Rounded NOx Initial Result				Remedy	Repairs	Test Cycle	Comments

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Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

Racic Info	rmation: En	gine Family #2	21																														
Basic Info	Manufacture PLT Test Cor Email Addres Phone #: Test Location Carryover?:	ntact: ss: n & description: d reduced required: //Commercial: OX+HC?	sample size:	Production (to	o date):	Engine Family: Projected Annue Date of Start of M Date of End of M Deterioration En Include Results Required Tests (Notes:	Model Year Produc lodel Year Produc ctor Type: from Engine Fami jincluding failure (ction: ily #21 on Summai follow-ups) —		Total 0	1		CO Standard Units CO Det Factor Det Factor Typ CO Green Eng	e i	g/kW-hr		Currei PM Standard Units PM Det Factor Ty PM Green En	or pe	g/kW-hr		Currenti HC Standard or Units HC Det Factor Det Factor Type HC Green Engir	r FEL	g/kW-hr	NG UI NG De	Final N Ox Standard of inits Ox Det Factor Type Ox Green Eng	r e	Ø30M-Hr					4 = 5-Mode Consta 5 = 6-Mode Variab	l Cycle (E3)
												J																					
PLT Engin	e Test Resu	lts: Engine Fa	mily #21																														
Liigiii	o root rest	nor Engine ra	,-721																														
Calc Fina Result?	al Test Number	Test Date	Test Time	Test Qtr En	Engine gine ID Make	Engine Configuration	Build Date	Green Engine Factor Applied?	Green Engine Factor Determination Method	Service Hours (or miles) Accumulatio	Service Hours Location	Service Acc. Procedure	CO Initial Result	Rounded CO Initial Result	CO Final Result	Det. CO Final Result			PM Final Result	Det. PM Final Result	HC Initial Resul	Rounded HC	HC Final Result	Det. HC Final Result	NOx Initial Result	Rounded NOx Initial Result	NOx Final Result	Det. NOx Final Result	Reason for Failed Test (if applicable)	Remedy	Repairs	Test Cycle	Comments
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Paperwork Reduction Act Notice
The public reporting and recordisceping bursten for this collection of information is estimated to see needing 2.1 hours per response. Send comments on the Agency's need for this information, the accuracy of the provided bursten estimates, and any suggested methods for minimizing respondent bursten, including through the use of automated collection retorations to the Description of the Description



Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

			C Pilot											Version Number	1.1 Last Revision De	ember 2013														
Basic Info	mation: En	gine Family #2	2																											
	Manufacture PLT Test Co Email Addres Phone #: Test Locatio Carryover?: Pre-approves Fuel Type:	er: Intact: In		Date of End of Deterioration Include Result Required Tests Notes:	ual Production: I Model Year Produ Model Year Produ factor Type: s from Engine Far s (including failure	uction: mily #22 on Summary Sheet?	Total 0	1		Current CO Standard Units CO Det Factor Det Factor Typ CO Green Eng	r pe	g/kW-hr		Curren PM Standard Units PM Det Facto Det Factor Tyl PM Green Eng	r De	g/kW-hr		Current I HC Standard or Units HC Det Factor Det Factor Type HC Green Engin	FEL	g/kW-hr		Final N NOx Standard of Units NOx Det Facto Det Factor Type NOx Green Eng	or FEL r e	g/kW-hr					4 = 5-Mode Consta 5 = 6-Mode Variabl	al Cycle (E3)
DI T En ele	T-110-11	de Englis des	-1h #00						,																					
PLI Engin	e Test Resu	ults: Engine fan	nily #22																										_	
Calc Fina Result?	I Test Number	r Test Date	Test Time Test Qtr Engine	Engine Engine e ID Make Configuration	n Build Date	Green Engine Factor Applied?	Service Hours (or miles) Accumulation	Service Hours Location	Service Acc. Procedure	CO Initial Result	Rounded CO Initial Result	CO Final Result	Det. CO Final Result	PM Initial Result	Rounded PM Initial Result	PM Final Result	Det. PM Final Result	HC Initial Result	Rounded HC Initial Result	HC Final Result	Det. HC Final Result	NOx Initial Result	Rounded NOx Initial Result	NOx Final Result	Det. NOx Fina Result	Reason for Failed Test (if applicable)	Remedy	Repairs	Test Cycle	Comments
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The public reporting and recordiseeping burden for this collection of information is estimated to average 12 hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and suggested methods for minimizing responselnet burden; vicioling though the use of automated collection techniques for the Director, Collection Stateagues Division, U.S. Environmental Protection Agency (28227), 1200 Pennsylvata Ave., NW, Washington, D.C. 29400. Include the CMB control number in any correspondance. Do not send the unompleted time to this address.



Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

Decie Info	was at law. En	eina Family #2	2																							
Basic Info	Manufacture PLT Test Co Email Addre Phone #: Test Locatio Carryover?: Pre-approve Recreational Model Year: Tier: Combined N 40 CFR Part:	intact: iss: on & description: id reduced required s il/Commercial: IOx+HC?		Date of End of M Deterioration Fa Include Results Required Tests Notes:	al Production: Model Year Production: Wodel Year Production:		Total 0		CO Standard Units CO Det Facto Det Factor Tyj CO Green Eng	or g/kM	-hr	PM Standar Units PM Det Fact Det Factor T PM Green Er	lor ype	g/kW-hr		Current HC Standard or Units HC Det Factor Det Factor Type HC Green Engir	g/kW-hr	-	Final NOx Result NOx Standard or FEL Units NOX Del Factor Del Factor Type NOX Green Engine Factor	g/kW-hr					4 = 5-Mode Constant 5 = 6-Mode Variable	Cycle (E3)
PLT Engir	Comments:	ults: Engine Fa	mily #23						Part 94 - Cate Size Status:	gory 2 Sample N/A																
Calc Fir Result	al ? Test Number	r Test Date	Test Time Test Qtr Engine II	Engine Engine D Make Configuration	Green Engir	Green Engine Fact Determination Method	Service Hours (or miles) Accumulation Location	Service Acc Procedure	. CO Initial Result	Rounded CO CO F Initial Result Res	inal Det. CO Fi	nal PM Initial Result	Rounded PM Initial Result	PM Final Result	Det. PM Final Result	HC Initial Resul	Rounded HC HC Final It Initial Result Result	Det. HC Fina Result	I NOx Initial Rounded NOx Result Initial Result	NOx Final Result	Det. NOx Fin Result	al Reason for Failed Test (if applicable)	Remedy	Repairs	Test Cycle	Comments
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L PROT			Version Number: 1.1 Last Revision: December 2013	<u> </u>	
Basic Information: Engine Family #24					
Manufacture: PLT Test Contact: Email Address: Phone ii: Test Location & description:	Engine Family: Projected Annual Production: Date of Stant of Model Year Production: Date of End of Model Year Production: Deterioration Factor Type:	Current CO Result	Current PM Result	Current HC Result	Final NOx Result
Carryover?: Pre-approved reduced required sample size: Fuel Type: Recreational/Commercial: Model Year:	Include Results from Engine Family #24 on Summary Sheet? Required Tests (including failure follow-ups) Notes:	CO Standard Units g/kW-hr CO Det Factor Det Factor Type CO Green Engine Factor	PM Standard or FEL Units PM Det Factor Det Factor Type PM Green Engine Factor	HC Standard or FEL Units HC Det Factor Det Factor Type HC Green Engine Factor	NOX Standard or FEL Units NOX Det Factor Det Factor Type NOX Green Engine Factor
Tier: Combined NOx+HC? 40 CFR Part: Total Actual Production (to date):	Q3 Actual Q2 Actual Q3 Actual Q4 Actual Total 0				
Comments:		Part 94 - Category 2 Sample Size Status: N/A			

OMB No. 2060-0641 Approval Expires on 11/30/2016 EPA Form 5900-298

Test Cycle Options

1 = 4-Mode General Cycle (E3)

2 = 5-Mode Recreational Cycle (E5)

3 = 4-Mode Constant Speed Propulsion Cycle (E2)

4 = 5-Mode Constant Speed Auxiliary Cycle (D2)

5 = 6-Mode Variable Speed Auxiliary Cycle (C2)

6 = 8-Mode Variable Speed Auxiliary Cycle (C1)

O = Other

PLT Engine Test Results: Engine Family #24

											Service																	Reason for Failed Test (if applicable)				
Calc Final					Engine	Engine		Green Engine	Green Engine Facto	Candon Hours for	Hours	Service Acc.	CO Initial	Rounded CO	CO Final Det. C	Final PM Init	al Rounded Pi	PM Final	Det. PM Fina	1	Rounded HC	HC Final	Det. HC Final	NOx Initial	Rounded NOx	NOx Final	Det. NOx Final	Reason for Failed Test (if				
Result?	Test Number	Test Date	Test Time Test	Qtr Engine ID	Make	Configuration	Build Date	Factor Applied?	Method	miles) Accumulation	Location	Procedure	Result	Initial Result	Result Re	ult Resu	Initial Result	Result	Result	HC Initial Result	t Initial Result	Result	Result	Result	Initial Result	Result	Result	applicable)	Remedy	Repairs	Test Cycle	Comments
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The public reporting and recordiseeping burden for this collection of information is estimated to average 12 hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for maintaining respondent burden, including through the use of automated collection techniques to the Director Collection Stategies Division, U.S. Environmental Protection Agency (2827T), 1200 Pennsylvania Ave., NW, Washington, D.C. 2436. Locke the Child Control number in any correspondence. Do not such after Controlled from the Stategies.



Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

					Version Number: 1.1 Last Revision: December 2013	, ,		
Basic Information: Engine Family #29	5							
Manufacturer: PLT Test Contact: Email Address: Phone #: Test Location & description:		Engine Family: Projected Annual Production: Date of Start of Model Year Production: Date of End of Model Year Production: Deterioration Factor Type:		Current CO Result	Current PM Result	Current HC Result	Final NOx Result	OMB No. 2060-0641 Approval Expires on 11/30/2016 EPA Form 5900-298
Carryover?: Pre-approved reduced required s Fuel Type: Recreational/Commercial: Model Year: Tier: Combined NOx+HC? 40 CFR Part:	sample size:	include Results from Engine Family #25 on Summary Sheet? Required Tests (including failure follow-ups) Notes:	1	CO Standard Units CO Det Factor Det Factor Type CO Green Engine Factor	PM Standard or FEL Units PM Det Factor Det Factor Type PM Green Engine Factor	HC Standard or FEL Units HC Det Factor Det Factor Type HC Green Engine Factor	NOX Standard or FEL. Units NOX Det Factor Det Factor Type NOX Green Engine Factor	Test Cycle Epidions 1 = 4 Mode General Cycle (E3) 2 = 5 Mode Recreational Cycle (E5) 2 = 5 Mode Recreational Cycle (E3) 4 = 5 Mode Constant Speed Auxiliary Cycle (E2) 5 = 6 Mode Variable Speed Auxiliary Cycle (E2) 6 = 8 Mode Variable Speed Auxiliary Cycle (E2) C = 0 Bert
Comments:	Total Actual Production (to date):	Q1 Actual Q2 Actual Q3 Actual Q4 Actua	i Total 0	Part 94 - Category 2 Sample Size Status: N/A				

PLT Engine Test Results: Engine Family #25

Calc Final					Engine	Engine		Green Engine	Green Engine Factor	Service	Service Acc	CO Initial	Pounded CO	CO Final	Det CO Sinal	PM Initial	Pounded PM	DM Einel	Det PM Einel		Pounded HC	HC Einel	Det HC Einel	NOv Initial	Pounded NOv	NOv Final D	tot MOv Einal	Reason for Failed Test (if applicable)				
Result?	Test Number	Test Date Tes	st Time Test	tr Engine	ID Make	Configuration	Build Date	Factor Applied?	Determination Method	Service Hours (or miles) Accumulation Location	Procedure	Result	Initial Result	Result	Result	Result	Initial Result	Result	Result	HC Initial Result	Initial Result	Result	Result	Result	Initial Result	Result	Result	applicable)	Remedy	Repairs	Test Cycle	Comments
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Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

Decie Info	motion. En	gine Family #2	20																														
Dasic IIII0	madon: Enç	gine Family #2	20																														
	Manufacturer					E	ingine Family:									_												_					OMB No. 2060-0641
	PLT Test Con	ntact:				Pi	rojected Annual	I Production:					Current	CO Result		1	Currer	nt PM Result			Current	HC Result		i	Final I	NOx Result		1					Approval Expires on
	Email Addres	is:				D	ate of Start of M	Model Year Produc	ction:							•							_	•				-					11/30/2016
	Phone #:					D.	ate of End of Mo	odel Year Product	tion:																								EPA Form 5900-298
		n & description:	_				eterioration Fac		LIOII.			_																					El Al Gill 5500 E50
	rest Location	a description.						from Engine Famil		Ch+0		_	CO Standard			1	PM Standard			1	HC Standard or			1	NOx Standard			7					
							nciude Results II	including failure f	iy #26 on Summa	iry Sneet?		_						OFFEL				FEL				OF FEL							
	Carryover?:			-		R	tequired Tests (i	including failure fo	ollow-ups)		1		Units CO Det Facto		g/kW-hr	4	Units PM Det Facto		g/kW-hr		Units		g/kW-hr		Units		g/kW-hr	4				Test Cycle Option	15.
	Pre-approved	reduced required:	sample size:	-		N	lotes:		_												HC Det Factor				NOx Det Facto	or		-				1 = 4-Mode Gener	al Cycle (E3)
	Fuel Type:												Det Factor Typ	e e			Det Factor Ty				Det Factor Type				Det Factor Typ	oe .		_				2 = 5-Mode Recre	ational Cycle (E5)
	Recreational/			L									CO Green Eng	ine Factor			PM Green Eng	gine Factor			HC Green Engir	ne Factor			NOx Green En	gine Factor						3 = 4-Mode Const	ant Speed Propulsion Cycle (E2)
	Model Year:																															4 = 5-Mode Const	ant Speed Auxiliary Cycle (D2)
	Tier:																															5 = 6-Mode Variab	le Speed Auxiliary Cycle (G2)
	Combined NO	Dx+HC?																														6 = 8-Mode Variab	le Speed Ausiliary Cycle (C1)
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DI T Engin	o Toet Bocul	lts: Engine Fa	mily #26																														
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Caic Fini	Test Number	Test Date	T		Facility ID	Engine	Engine Configuration	Double Date	Green Engine	Determination	Service Hours (or Hours	Service Acc	. CO initial	Rounded CO	CO Finai	Det. CO Final	PM initial	Rounded PM Initial Result	PM Final	Det. PM Final		Rounded HC	HC Finai	Det. HC Final	NOX Initial	Rounded NOX	NOX FINAI	Det. NOX Fina	applicable)	Remedy	Repairs	Test Cycle	Comments
Result	rest Number	Test Date	rest rime	rest Qtr	Engine ID	make	Configuration	Build Date	Factor Applied	? Method	miles) Accumulation Locatio	n Procedure	Result	iniuai Result	Result	Result	Result	initial Result	Result	Result	HC Initial Resul	it initiai Result	Result	Result	Result	initiai Result	Result	Result	аррисавіе)	Remedy	Repairs	Test Cycle	Comments
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Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

Basic Information: Engine Family #2	7																
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Manufacturer:			Engine Family:														
PLT Test Contact:			Projected Annu						Current CO Result		Current PM Result		Current HC Result		Final NOx Result		
Email Address:				Model Year Produ	ction:												
Phone #:			Date of End of I	Model Year Produc	tion:												
Test Location & description:			Deterioration F														
				from Engine Fam		y Sheet?			CO Standard		PM Standard or FEL		HC Standard or FEL		NOx Standard or FEL		
Carryover?:				(including failure	follow-ups)			1	Units	g/kW-hr	Units	g/kW-hr	Units	g/kW-hr	Units	g/kW-hr	
Pre-approved reduced required :	ample size:		Notes:		_				CO Det Factor		PM Det Factor		HC Det Factor		NOx Det Factor		
Fuel Type:									Det Factor Type		Det Factor Type		Det Factor Type		Det Factor Type		
Recreational/Commercial:		$\overline{}$							CO Green Engine Factor		PM Green Engine Factor		HC Green Engine Factor		NOx Green Engine Factor		
Model Year:		$\overline{}$															
Tier:																	
Combined NOx+HC?																	
40 CFR Part:			Q1 Actual	Q2 Actual	Q3 Actual	Q4 Actual	Total										
	Total Actual Producti	(44-4-1)	Q1 Actual	Q2 Actual	Q3 Actual	Q4 Actual	Total										
	Total Actual Producti	on (to date):					U										

Part 94 – Category 2 Sample Size Status: N/A

Test Cycle Options

1 = 4-Mode General Cycle (E3)

2 = 5-Mode Rereational Cycle (E5)

3 = 4-Mode Constant Speed Propulsion Cycle (E2)

5 = 6-Mode Variable Speed Auxiliary Cycle (D2)

5 = 6-Mode Variable Speed Auxiliary Cycle (C2)

0 = Other

PLT Engine Test Results: Engine Family #27

Comments:

				Test Qtr Engine ID Make				Green Engine Easts		Service																						
Calc Final				Engine	Engine		Green Engine	Determination	Service Hours for	Hours	Service Acc.	CO Initial	Rounded CO	CO Final	Det. CO Final	PM Initial	Rounded PM	PM Final	Det. PM Final	1	Rounded HC	HC Final	Det. HC Final	NOx Initial	Rounded NOx	NOx Final	Det. NOx Final	Reason for Failed Test (if				
Result?	Test Number	Test Date	Test Time	Test Otr Engine ID Make	Configuration	Build Date	Factor Applied?	Method	miles) Accumulation	Location	Procedure	Result	Initial Result	Result	Result	Result	Initial Result	Result	Result	HC Initial Result	Initial Result	Result	Result	Result	Initial Result	Result	Result	applicable)	Remedy	Repairs	Test Cycle	Comments
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Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

																	Version Number:	: 1.1 Last Revision: Dec	tember 2013														
Basic Inf	ormation: En	gine Family #	28																														
	Manufacture PLT Test Co Email Addre Phone 8: Test Locatic Carryover?: Pre-approve Fuel Type: Recreationa Model Year: Tier: Combined N 40 CFR Part	er: intact: sss: on & description: of reduced required al(Commercial: IOX+HC?	f sample size:	al Producti	ion (to date		Engine Family: Projected Annual Date of Start of M Date of End of M Deterioration Fac Include Results I Required Tests (I Notes: Q1 Actual	Model Year Productor Type: tor Type: from Engine Fami including failure	ction: hily #28 on Summa follow-ups) —		Total 0		CO Standard Units CO Det Factor Det Factor Ty CO Green En	or ype gjine Factor	g/kW-hr	1	Curren PM Standard Units PM Det Factor Tyl PM Green Eng	or pe	gAW-hr		Current HC Standard or Units HC Det Factor Det Factor Typ HC Green Engli	e	g/kW-hr		Final I NOx Standard Units NOX Det Facto Det Factor Typ NOX Green En	or pe	g/kW-hr					4 = 5-Mode Consta 5 = 6-Mode Variabl	OMB No. 2060-0641 Approval Expires on 11/13/07/016 EPA Form 5900-298 Ist Ocycle (ES) Ist Ocycle (ES) Ist Speed Auxiliary Ocycle (E2) Ist Speed Auxiliary Ocycle (E3)
PLT Eng	ine Test Resu	ults: Engine Fa	amily #28																														
Calc F Resu	inal lt? Test Numbe	r Test Date	Test Time	e Test Qt	tr Engine	Engine ID Make	Engine Configuration	Build Date	Green Engine Factor Applied	Green Engine Factor Determination Method	or Service Hours (or miles) Accumulation Location	Service Acc	c. CO Initial Result	Rounded CO Initial Result	CO Final Result	Det. CO Final Result	PM Initial Result	Rounded PM Initial Result	PM Final Result	Det. PM Fina Result	l HC Initial Resu	Rounded HC It Initial Result	HC Final Result	Det. HC Final Result	I NOx Initial Result	Rounded NOx Initial Result	NOx Final Result	Det. NOx Fina Result	l Reason for Failed Test (if applicable)	Remedy	Repairs	Test Cycle	Comments
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Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

Basic Info	ormation: En	gine Family #2	0																													
	Manufacture PLT Test Co. Email Addre: Phone #: Test Locatio Carryover?: Pre-approver Fuel Type:	or: ntact: ss: n & description: d reduced required s l/Commercial: Ox+HC?	sample size:	Production (to date	Date of Date of Deterior Include Require Notes:	Annual Producti lart of Model Yea nd of Model Yea tion Factor Type: esults from Engi Tests (including	r Production:		Total 0	1		Current CO Standard Units CO Det Factor Det Factor Typ CO Green Eng Part 94 - Cate Size Status:	e	g/kW-hr		Curren PM Standard Units PM Det Factor Typ PM Green Eng	r oe	g/kW-hr	•	Current I HC Standard or Units HC Det Factor Det Factor Type HC Green Engin	FEL	g/kW-hr		NOx Standard Units NOx Det Facts Det Factor Typ NOx Green En	or e	g/kW-hr					4 = 5-Mode Consta 5 = 6-Mode Variab	Cycle (E3)
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PLT Engi	ne Test Resu	ılts: Engine Faı	mily #29																													
			_																													
Calc Fir	nal t? Test Number	Test Date	Toot Time	Toot Otr Engine I	Engine En Make Config	ine ration Build	Green Engin	Green Engine Fact Determination	or Service Hours (or	Service Hours	Service Acc.	CO Initial	Rounded CO Initial Result	CO Final Result	Det. CO Final Result	PM Initial Result	Rounded PM Initial Result	PM Final D	et. PM Final	HC Initial Result	Rounded HC	HC Final Result	Det. HC Final Result	NOx Initial Result	Rounded NOx Initial Result	NOx Final	Det. NOx Final Result	Reason for Failed Test (if applicable)	Remedy	Repairs	Test Cycle	Comments
1	t: Test Number	Test Date	Test Time	rest Qti Engine i	o make Coming	ilation Build	Date Pactor Applie	r meurod	miles) Accumulate	Location	Procedure	Result	illiudi Result	Result	Result	Result	ilitia Result	Result	Result	no ilitiai Result	illiudi Result	Result	Result	Result	ilitiai Result	Result	Result	аррисавіе)	Reilledy	Repairs	rest Cycle	Confinents
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We will also the control of the Agency Send of the Collection of the Agency (2822T), 1200 Pennsylvania view, MW, Weishington, D. C. 28460. Unclude the Collection of number in any correspondence. Do not send the completed from to this address.



Manufacturer Production Line Testing Report for Marine Compression Ignition Engines

																	Version Number	: 1.1 Last Revision: Dece	mber 2013														
Decie Info	umation. En	gine Family #3	20																													_	
	Manufacture PLT Test Cor PLT Test Cor Plant Addres Test Location Carryover?: Pre-approver Fuel Type: Recreational Model Year: Tier: Combined N 40 CFR Part: Comments:	st: ntact: sss: un & description: d reduced required : llCommercial: lOx+HC?	sample size:	I Production (to	date):	Date of End of M Deterioration Fac Include Results 1	Model Year Productional Year Production Type: from Engine Fami fincluding failure f	ction: ily #30 on Summa follow-ups) 		Total 0	1]	CO Standard Units CO Det Factor Det Factor Typ CO Green Eng	ie	g/kW-hr		Currer PM Standard Units PM Det Factor Ty PM Green En	or pe	g/kW-hr		Current I HC Standard or Units HC Det Factor Det Factor Type HC Green Engin	FEL	g/kW-hr		Final N NOX Standard Units NOX Det Factor Det Factor Typ NOX Green En	or ie	g/kW-hr					4 = 5-Mode Consta 5 = 6-Mode Variabl	OMB No. 2050-0641 Approval Expires on 11/30/2016 EPA Form 5900-298 Si Cycle (E3) I Cycle (E3) I Cycle (E5) Int Speed Auxiliary Cycle (C2) Int Speed Auxiliary Cycle (C2) Espeed Auxiliary Cycle (C2) Espeed Auxiliary Cycle (C1)
PLT Engir	e Test Resu	ılts: Engine Fa	milv #30																														
Calc Fin	al ? Test Number	r Test Date	Test Time	Test Otr Fng	Engine	Engine Configuration	Ruild Date	Green Engine	Green Engine Factor Determination	or Service Hours (or miles) Accumulation	Service Hours	Service Acc.	CO Initial Result	Rounded CO Initial Result	CO Final Result	Det. CO Final Result	PM Initial Result	Rounded PM Initial Result	PM Final Result	Det. PM Final Result	HC Initial Result	Rounded HC	HC Final Result	Det. HC Final Result	NOx Initial Result	Rounded NOx Initial Result	NOx Final Result	Det. NOx Final Result	Reason for Failed Test (if applicable)	Remedy	Repairs	Test Cycle	Comments
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United States

US Environmental Protection Agency

Office of Air and Radiation, Office of Transportation and Air Quality

Manufacturer Production Line Testing Report for Marine Compression-Ignition Engines

Version Number: 1.1 Last Revision: December 2013

Basic Information: Invalid Tes	sts												
Manufacturer: PLT Test Contact: Email Address: Phone #:			ction: t of Model Year Produ of Model Year Produc			0						OMB No. 2 Approval Ex 11/30/2 EPA Form	xpires on 2016
Test Location & description: Comments:													
Invalid PLT Engine Test Resu	lts												
			Engine	Green Engine Factor	Green Engine Factor	Service Hours (or miles)	Service Acc.	CO Final Result (g/kW-		NOx Final Result (a/kW-	HC Final Result (g/kW-		

	Engine Family	Test Number	Test Date	Test Time	Test Qtr	Engine ID	Engine Make	Engine Configuration	Build Date	Green Engine Factor Applied?	Green Engine Factor Determination Method	Service Hours (or miles) Accumulation	Service Hours Location	Service Acc. Procedure	CO Final Result (g/kW- hr)	PM Final Result (g/kW- hr)	HC+NOx Final Result (g/kW- hr)	NOx Final Result (g/kW- hr)	HC Final Result (g/kW- hr)	Reason for Invalid Test	Additional Comments
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	Version Number: 1.1 Last Revision: December 2013
Manufacturer Notes	
Please provide any additional notes here.	

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OMB No. 2060-0641 Approval Expires on 11/30/2016 EPA Form 5900-298