

# **Instructions for Certifying Nonroad Spark-Ignition Engines (Less than or Equal to 19 Kilowatts)**

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U.S. Environmental Protection Agency  
Office of Transportation and Air Quality  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

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## I. Introduction

This document provides information on preparing, submitting and revising certification applications for new nonroad spark-ignition (SI) engines at or below 19 kilowatts (hereafter referred to as Nonroad SI Engines). The Federal regulations that govern these engines are part of Title 40 of the Code of Federal Regulations (CFR), Part 90. Refer specifically to 40 CFR 90.1 to ensure that this regulation is applicable. Also, note that Nonroad SI Engines sold in California may be subject to California regulations and, thus, must be certified by the California Air Resources Board (CARB) in addition to the Environmental Protection Agency (EPA).

## II. Pre-Application

Items in this section should be established by the manufacturer and EPA prior to preparation of the certification application.

### A. Obtaining a Manufacturer Code

It is required that engine manufacturers notify the EPA if they intend to manufacture small engines in EPA certified configurations. However, such notification does not obligate a manufacturer to certify engines. If a manufacturer has not previously certified mobile source engines or vehicles with EPA, EPA will assign a manufacturer code, consisting of three letters or a combination of letter(s) and number(s), that will be a permanent code included in the manufacturer's engine family designations.

EPA now uses the Verify system to register a manufacturer. The point of contact for the manufacturer will need to register their intent in the Verify system. The point of contact will need to follow the detailed directions on the three files listed below that can be downloaded from <http://epa.gov/dis/>. At this website, under the **Compliance Document Type** select "**Verify System Documentation**" and Click **Search**. The three files are as follows:

- How to register a company with EPA (request a manufacturer code);
- Verify (CDX) User Registration Information Template; and
- Creating Verify (CDX) User Accounts.

When registration is complete, a manufacturer code will be assigned.

### B. Contact Persons

The manufacturer should assign a primary contact person to work with EPA. EPA will direct all calls and mailings, including the certificate of conformity, to the manufacturer's primary contact unless otherwise directed by the

manufacturer. EPA will prefer the manufacturer's primary contact be located in the United States.

EPA will assign a primary EPA contact person for each manufacturer. Information for the EPA primary contact person may be mailed to (note: Express Mail to this address will be returned to sender):

Heavy-Duty and Nonroad Engine Group  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave. N.W.  
Mail Code 6405J  
Washington, DC 20460

Note that all mail delivered to the 1200 Pennsylvania Avenue address will not reach the Heavy-Duty and Nonroad Engine Group immediately – delivery can take a few weeks. For Express Mail deliveries (regular U.S. mail delivered to this address will be returned to sender):

Heavy-Duty and Nonroad Engine Group  
U.S. Environmental Protection Agency  
1310 L Street, NW  
Suite 656C  
Washington, DC 20005

Initial questions should be directed to Mike Marko at one of the above addresses. Mr. Marko can be reached at [marko.michael@epa.gov](mailto:marko.michael@epa.gov). Mr. Marko will direct manufacturers to the primary EPA contact person as appropriate.

### C. Manufacturer's Model Year Preview

EPA suggests that each manufacturer provide a preview of its certification plans each model year. The preview should include an estimate of the number of engine families to be certified, when production is planned to begin, and any unusual or special circumstances that may affect certification. Unless circumstances dictate a response, EPA will not respond to the model year preview letter. Model year preview information may be mailed to the Heavy-Duty and Nonroad Engine Group at one of the above addresses.

The model year preview is the best time to notify EPA of any advance approvals that may be needed for variations from the regulations in test procedure, equipment, or facilities. Failure to request advance approval in a timely manner is likely to result in a delay in certificate issuance.

### III. New Application

Certification is required on a model year basis. EPA asks that certification applications be submitted no earlier than one year prior to the start of production.

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For example, for the 2007 model year, certification could be effective as early as January 2, 2006. Therefore, EPA would accept applications for 2007 model year certification as early as January 2005. The certificate does not become “effective” until the “effective date” shown on it.

Manufacturers must apply for certification on an annual basis. While a production period greater than one year is permitted, a manufacturer may not use the production period definition to skip certification of a model year. A production period may include only the January 1 of the calendar year for which the model year is named, ends no later than December 31 of the calendar year for which the model is named, and does not begin sooner than January 2 of the previous calendar year. The following elements discussed in this section comprise a complete EPA application:

- Paid Fee
- Signed Statement of Compliance
- FileMaker Pro Application

#### A. Determining Engine Families

To get started on the certification process, manufacturers should determine designations for the different groups of engines, or families, which are to be certified. The criteria for selecting engine families are included in 40 CFR 90.116(d). Once the engine family groupings have been selected, an engine family name should be created using the instructions in Appendix A.

#### B. Application Fee

Once engine families have been determined, application fees can be submitted. The “Guidance” link on the following website has payment instructions, fee amounts (which change periodically), fee transmission information, and the actual fee filing form that needs to be submitted with the payment (<http://www.epa.gov/otaq/fees.htm>).

The fee filing form must be submitted with payment for each engine family that is to be certified. The fee is collected by a central bank for the Motor Vehicle and Engine Compliance Program (MVECP). The MVECP Certification Fee Filing Form and fee payment can also be completed online at <https://www.pay.gov/paygov/>.

Since payment is not directly handled by the Heavy-Duty and Nonroad Engine Group in EPA, a substantial time lag between transmission of payment and fee filing forms and payment notification to EPA can exist. EPA will not start the review process until confirmation is received that all required fees have been

paid. Therefore, to expedite review of the application, it is suggested that payment be submitted in advance of the submission of the rest of the application.

#### C. Statement of Compliance

A signed statement of compliance is required as part of a complete certification application. Requirements for this statement are included in 40 CFR 90.107. A sample statement of compliance is included in Appendix B. The signed statement of compliance should be mailed to your EPA Nonroad SI Engine manufacturer contact.

The signed statement of compliance signifies manufacturer understanding and acceptance of the emission standards and other requirements of 40 CFR 90. (The Phase 1 and Phase 2 standards for Nonroad SI Engines are included in 40 CFR 90.103.) In the statement of compliance, manufacturers should specifically refer to the set of regulations to which the engine complies.

#### D. FileMaker Pro Application

Engine family certification information should be submitted using a FileMaker Pro application template created by EPA for Nonroad SI Engines. A zip file including the files for this template and installation instructions can be found at the following website: <http://www.epa.gov/otaq/certdat2.htm>. The zip file is located in the "Engine Certification Templates" table on the webpage.

For further guidance on how to complete the FileMaker Pro Application, please refer to Appendix C.

#### E. Confidential Business Information (CBI)

Information which is to be considered CBI is clearly marked in the FileMaker Pro template. The template is designed such that only non-CBI is entered into the file when each Nonroad SI Engine manufacturer's certification data is posted on EPA's engine certification data website (<http://www.epa.gov/otaq/certdata.htm>). For additional information on CBI, please refer to Appendix D and 40 CFR 90.4.

#### F. Durability Testing / Deterioration Factor (DF) Calculation

The purpose of durability testing is to ensure that an engine will remain in compliance with the applicable emission standards for the duration of its useful life. (The different useful life periods for all Nonroad SI Engine classes are defined in 40 CFR 90.105 and each Nonroad SI Engine class is defined in 40 CFR 90.116.) This is accomplished by the calculation of deterioration factors (DFs), which relate an engine's emissions at the end of its useful life to the beginning of its useful life.

The development of DFs is described in 40 CFR 90.104. Small-volume engine manufacturers and small volume engine families, as defined in 40 CFR 90.3, may use assigned DFs from Table 1 and Table 2 of 40 CFR 90.104 in lieu of running the actual service accumulation. Service accumulation for durability testing and the usage of deterioration factors is described in 40 CFR 90.118 and 40 CFR 90.408.

#### G. Certification Testing

Please refer to 40 CFR 90.119(a) and Table 2 of Appendix A to Subpart E of 40 CFR Part 90 to determine the applicable test cycles for the engines to be certified. Please refer to 40 CFR Part 90, Subpart E for information about certification testing as allowed in the regulations.

Upon EPA approval, special and alternate test procedures may be used instead of the prescribed regulatory test procedures. Because EPA must monitor deviations from prescribed procedures, the certification format specified in this document requires that manufacturers attest that the prescribed regulatory procedures have been followed, or that the manufacturer must briefly describe any deviations from the prescribed regulatory procedures in the statement of compliance section of the application, which is described in Section III.C of this document.

Manufacturers are allowed to request that special and alternate test procedures be approved by EPA under 40 CFR 90.120. Special or alternate test procedures may include the use of alternate fuels, test cycles which differ from those described in 40 CFR 90, Subpart E, or any other deviation in test procedure. Ideally, manufacturers should propose special and alternate test procedures during the manufacturer's model year preview, as described in Section II.C of this document.

The manufacturer should submit a formal written request for the alternate test procedure. When the manufacturer submits an application for an engine family which was tested using special or alternate procedures, a description of the procedure must be included in the statement of compliance. The description should identify the engine families for which the procedure applies, include a brief explanation of the procedure(s) and provide adequate reference to more detailed documentation on the procedure and indication of EPA approval. It is recommended that the manufacturer also reference EPA approval in the electronic application under a comments write-in section.

#### H. Certification Fuel

Three types of certification fuel are allowed by 40 CFR Part 90. The first two fuel options are described in 40 CFR 90.308(b)(1). The first fuel option is average in-use gasoline (e.g., Clean Air Act Baseline), specified in 40 CFR 90, Subpart D, Appendix A, Table 3. The second option is to use the fuel specified in

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40 CFR 1065, subpart H, for gasoline-fueled engines. Note that manufacturers may request approval by the Administrator to use fuels with substantially equivalent specifications to these two options.

A third option is that Nonroad SI Engine manufacturers may use other fuels, such as natural gas, propane, methanol, or others, under conditions described at 40 CFR 90.308(b)(2) and (3).

#### I. Data Carry Over

Under 40 CFR 90.119(c), the engine manufacturer may request to use test data from a previous EPA model year to represent a new EPA model year. This is known as “carrying over” data. Spaces are provided on the FileMaker Pro certification template for manufacturers to designate “carry over” data. Any differences between the previous and new model year engines must be shown not to cause the engine family to exceed the certification level.

#### J. Averaging, Banking, and Trading / Family Emission Limits

Manufacturers who wish to participate in the optional Averaging, Banking, and Trading (ABT) program should refer to the requirements in 40 CFR Part 90, Subpart C. In order to participate, manufacturers need to first determine Family Emission Limits (FELs) for each regulated pollutant for each engine family chosen to participate in ABT. Family Emission Limit is defined in 40 CFR 90.3. After determining the FEL, manufacturers can calculate the quantity of credits accumulated or spent using the equation in 40 CFR 90.207(a). Manufacturers should note all of the requirements for participating in the ABT program such as maintenance of records, end-of-year reporting, and final reporting.

#### K. Labeling

The required content of the engine label is included in Appendix E of this document. Manufacturers should note that issuance of an EPA certificate of conformity does not represent approval of an engine label. Only approval granted specifically for engine labels should be referenced on the FileMaker Pro template in the “Label/Warranty” section by its date, approval number, or another identifying characteristic.

Under authority of 40 CFR 90.114(e) to modify the engine label content requirements contained in 40 CFR 90.114(c), EPA will allow a common California and federal label. The label must state that the engine meets federal standards and the label must include the full corporate name and trademark of the engine manufacturer. See Appendix E for suggested Federal-only and combined Federal and California engine label language. Note that the engine must be certified in both California and federally to use the 50-state engine label option.



If an engine family certified in both California and federally has different family names for CARB and EPA, the manufacturer has the option of: 1) using two different labels or 2) using one label which indicates compliance with California and federal regulations and also lists both family names, clearly indicating which is the federal and which is the California name.

Under 40 CFR 90.114(b), if nonroad equipment obscures the engine label, the nonroad equipment manufacturer must attach a supplemental label which is identical in content to the label which was obscured. EPA has determined that the intent of the small engine labeling requirements regarding the date of manufacture of the engine is met as long as that date is included on the engine label or is stamped on the engine and included in the owner's manual, regardless of whether these dates are obscured by the nonroad vehicle. Thus, under authority of 40 CFR 90.114(e), to modify requirements of 40 CFR 90.114(c) or (d), EPA will permit equipment manufacturers to omit the date of engine manufacture from the supplemental label provided that such information is either on the engine label or stamped on the engine.

EPA will permit the equipment manufacturer's name to appear on the supplemental label and/or the engine emission label in place of the engine manufacturer's name provided that the engine manufacturer notifies EPA. A sample engine label is included in Appendix E.

#### L. Completing the Application

After the FileMaker application has been completed, manufacturers should keep a copy of the completed template for their records. Manufacturers should mail the application files on a Compact Disk or 3.5 inch disk, the signed statement of compliance and any supplemental information to their contact person listed in Section II.B of this document. Please send the CD or disk via overnight mail / courier to the address given in Section II.B. Do not send CDs via regular postal mail as they will likely be damaged by the U.S. Postal Service's radiation process.

Alternatively, manufacturers may submit the application files by email to [Application-SI\\_Cert@epa.gov](mailto:Application-SI_Cert@epa.gov) and should format the subject line to read as follows:

Subject: Engine Category – Manufacturer – Number of Submissions and Process Code\*

\* Process codes include: New Submission, FEL Change, Correction, or Running Change

Example: Subject Line: NRSI-ABC Engine Co.-2 FEL changes, 1 New Submission, 1Running Change

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Manufacturers submitting more than one set of application files via email should rename the attached files so that they can be distinguished by engine family name. Manufacturers having concerns about submitting CBI via email may prefer to submit application files via overnight mail / courier as described above.

#### M. EPA Review

EPA will strive to review an application within 30 calendar days of its receipt and confirmation of payment of the specified fee. Manufacturers should be aware that the end of the calendar year is when EPA is busiest reviewing applications because most certificate applications are sent at that time.

As part of the review, EPA will determine whether to request additional information (audit) and/or to perform confirmatory testing. Manufacturers should plan to keep the test engine in its certification configuration until the end of production.

If a review is delayed due to unforeseen circumstances, the EPA contact will call or e-mail the manufacturer's primary contact. The EPA contact may also call or e-mail to get further information about the application during the course of application review.

#### N. Certificate of Conformity

EPA will issue a certificate of conformity for an engine family once the Agency determines that the regulatory requirements are met. A sample certificate is included in Appendix F. The effective date listed on the certificate is the date that engines covered by the certificate can be introduced into commerce. The certificate ceases to be valid for new production at the end of the production period or December 31 of the calendar year for which the model year is named, whichever date is sooner.

In most cases, the effective date of the certificate will be the date that the certificate is signed (the issue date). However, in cases in which a manufacturer requests unusually early certification, the effective date would be January 2 of the first calendar year in which the engine family can be introduced into commerce. For example, if a certificate for the 2006 Model Year is issued on October 31, 2004, the effective date of the certificate would be January 2, 2005.

The certificate of conformity is signed by the Director of the Compliance and Innovative Strategies Division who is delegated with signature authority by the EPA Administrator. A certificate is not valid without this signature. An electronic version of the original signed certificate will be e-mailed to the "Contact Person" listed on the Engine Family page of the FileMaker Pro application. Therefore, check to ensure that the correct contact person and contact

information (mailing address, phone number, fax number, and e-mail) are listed on the application.

#### IV. Amending an Application (Running Changes)

After the application has been submitted, the manufacturer may need to amend it – a modification that is known as a “running change” or amendment. EPA requires submission of running changes (using the same FileMaker Pro template as for certification) in order to have documentation that production engines are built in accordance with the certificate and to monitor potential changes in emissions from production engines. Running changes or amendments which must be reported are those which involve a product line change that may have an effect on emissions and/or those which change information reported in the application. As described in 40 CFR 90.122, manufacturers may report amendments to an application either in advance or concurrently with making a change in production.

If a certificate of conformity has already been issued, the manufacturer needs to submit the following information for a running change in a new, blank FileMaker Pro template:

1. Enter Manufacturer Name on the Engine Family Identification Form
2. Enter Engine Family Name on the Engine Family Identification Form
3. Enter “Running Change” under the “Process Code” on the Engine Family Information Form
4. Enter a description of the running change and why it’s necessary in the “Comments” box on the Engine Family Identification Form.
5. Enter responses for only those questions for which a change occurred on all relevant pages of the electronic application. All other fields in the electronic application intended for information that has not changed may be left blank. It is highly encouraged that the comments section be used to describe the running change in sufficient detail.

If the running change is expected to increase emissions or would change the test engine selection, the manufacturer is required to either submit test data showing compliance after incorporating the running change, or to submit an engineering evaluation as to why engines will remain in compliance with all applicable standards and regulations. If the change is not expected to increase emissions, the manufacturer should submit the reason for that conclusion. EPA may require the manufacturer to perform tests on an engine representing the engine to be changed or added.

Changes that may affect the durability of the emission control system, including but not limited to changes that may affect catalyst durability, must also be reported. EPA considers emission-related running changes to be

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amendments which add an engine model, potentially affect emissions or durability, or affect emission-related components.

Running changes which would result in the need for issuance of a new certificate of conformity, such as a change in the FEL, cannot be initiated prior to receipt of a new certificate. An FEL change will be effective on the day the new certificate is issued. If an FEL change is requested, the manufacturer should apply using a FileMaker Pro template as described above and should use "FEL Change" in the "Process Code" field.

The concurrent notification procedure for running changes described in 40 CFR 90.122(e) is similar to the optional notification procedure used by on-highway manufacturers. While this procedure does not eliminate EPA review, it does allow manufacturers to make changes without prior EPA review. However, if EPA determines that affected engines do not meet applicable requirements, EPA will notify the manufacturer that the running change is disapproved and that production of the affected engines should be ceased.

## Appendix A

### EPA Standardized Engine Family Names

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## APPENDIX A: EPA STANDARDIZED ENGINE FAMILY NAMES

<u>Number Characters</u>	<u>Columns</u>	<u>Description</u>
1	1	Model Year (See Table 1 of Appendix A)
3	2-4	Letter code identifying manufacturer.
1	5	<p>Family type</p> <p>N - Nonstandard family type</p> <p>V - Light-duty vehicle family</p> <p>T - Light-duty truck family</p> <p>C - Motorcycle family</p> <p>E - Evaporative family</p> <p>H - Heavy, heavy-duty engine family</p> <p><b>S - Small SI family</b></p> <p>B - Large SI family</p> <p>M - Marine engine family</p> <p>A - California only medium duty family</p> <p>R - Evaporative/ Refueling family</p> <p>Y - Snowmobile</p>
4	6-9	<p>Displacement in liters (e.g. 05.7-the decimal point counts as a digit and the leading zero is a space) or cubic centimeters (e.g., 0350, 0097). For dual or variable displacement families enter the <u>maximum</u> displacement. For large displacement engines, the displacement may be entered as <u>XX.X</u> format (e.g., 12.1). Small engines may be entered as a <u>.XXX</u> format (e.g., .072, 0.07, 00.7). In all cases the displacement will be read in liters if a decimal point is entered and it will be read in cubic centimeters if there is no decimal point.</p>

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<u>Number Characters</u>	<u>Columns</u>	<u>Description</u>
1	10	Engine Class. Engine class designations are specified at 40 CFR 90.116(b) as follows:(1) Class I-nonhandheld equipment engines greater than or equal to 100 cubic centimeters (cc) and less than 225 cc in displacement, (A)Class IA – nonhandheld equipment engines less than 66 cc in displacement, (B) Class IB – nonhandheld equipment engines greater than or equal to 66 cc but less than 100 cc, (2)Class II-nonhandheld equipment engines greater than or equal to 225 cc in displacement, (3)Class III-handheld equipment engines less than 20 cc in displacement, (4)Class IV-handheld equipment engines greater than or equal to 20 cc but less than 50 cc in displacement, (5)Class V-handheld equipment engines greater than or equal to 50 cc in displacement.
2	11-12	Sequence characters. Enter any combination of valid characters to provide a unique identification for the family name. It is recommended that numbers and letters be selected that minimize possible confusion.

### EXAMPLE

Given: Company XY has a 2006 model 0.145 L, gasoline-fueled, Otto-cycle engine that will power a walk-behind mower.

6 = 2006 model year  
 XYX = XY Engine Corporation  
 S = Small engine  
 .145 = Displacement in liters  
 1 = Engine Class I. Nonhandheld, less than 225 cc.  
 AB = 2 character code which uniquely identifies the family name.

Therefore, the engine family name is 6XYXS.1451AB.

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**TABLE 1. LETTER CODES FOR MODEL YEAR**

CODE	YEAR	CODE	YEAR	CODE	YEAR
1	2001	A	2010	K	2019
2	2002	B	2011	L	2020
3	2003	C	2012	M	2021
4	2004	D	2013	N	2022
5	2005	E	2014	P	2023
6	2006	F	2015	R	2024
7	2007	G	2016	S	2025
8	2008	H	2017	T	2026
9	2009	J	2018	V	2027

For additional information on engine family naming, refer to the EPA manufacturer letter C1SD-07-03. EPA manufacturer letters can be found at the following website: <http://www.epa.gov/otaq/cert/dearmfr/dearmfr.htm>

**\* NOTE:** EPA allows carryover of family name on labels; however, manufacturers must update family name and the date of manufacture on applications.



## Appendix B

### Sample Statement of Compliance

## APPENDIX B: SAMPLE STATEMENT OF COMPLIANCE

Manufacturer Primary Contact  
XY Engine Company  
4567 Industrial Highway  
El Monte, CA 91731

March 1, 200x

Heavy-Duty and Nonroad Engine Group  
U.S. Environmental Protection Agency  
Mail Code 6403J  
1200 Pennsylvania Ave, NW  
Washington, DC 20460

Dear \_\_\_\_\_:

Please find enclosed the model year 200x application for engine family 6XYES.1452GR. On behalf of XY Engine Company, I hereby certify that the test engine(s), as described in this application for certification, has been tested in accordance with the applicable test procedures, utilizing the fuels and equipment required under subparts D and E of 40 CFR 90, and that on the basis of such tests the engine(s) conforms to the requirements of 40 CFR 90. I further certify that all engines in this engine family comply with all requirements of 40 CFR 90 and the Clean Air Act.

Sincerely,

[MANUFACTURER PRIMARY CONTACT]

*SIGNATURE*

Enclosures

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Refer in this letter to any alternate or special test procedure approvals or any other approvals required from EPA for this engine family. It is recommended that manufacturers print the statement of compliance on company letterhead.

## Appendix C

### Instructions for Completing Application Form

## **APPENDIX C: INSTRUCTIONS FOR COMPLETING APPLICATION FORM**

### Confidential Business Information (CBI)

Certain items on the FileMaker Template are included in CBI blocks so the manufacturer can designate them as CBI. Once the application has been received and reviewed by the EPA certification representative, the material designated confidential by the manufacturer, will be erased from the public version of the database and the remainder of the application will be made public.

### Diagnostic Check

The EPA database contains a built-in diagnostic check. The purpose of the diagnostic check is to ensure all required information has been entered on the Family Info, Test Info, Cert Summary, Label/Warranty and Model Info forms. The diagnostic check also looks for common mistakes such as making sure the family name has the correct designator. The diagnostic check will not take the place of the certification reviewer. Any errors found on the aforementioned forms will be listed in a box on the right-hand side of the form called "Diagnostic Check Results." Manufacturers must run the diagnostic check and correct any errors prior to submitting applications.

### Family Info (Multiple Pages)

1. Manufacturer Name
2. Engine Displacement Class (pull down menu)  
  
Engine class designations are specified in 40 CFR 90.116(a).
3. Contact Person, Address, Phone, E-Mail, and Fax Number

List the individual who is to receive all communications. Unless clearly specified otherwise, this person will receive every form of correspondence, including the certificate of conformity. EPA prefers the manufacturer's primary contact be in the United States. If you wish for someone else to receive the certificate of conformity, please list that person's name and address second.

4. Production Plant Location(s) and Contact(s)

Provide the address(es) of the plant(s) and contact(s) (including phone, e-mail, and fax) where engine production occurs. Equipment manufacturers who certify must identify the company and production plant where the engine will be produced.

5. Model Year (pull down menu)

List the 4 digit model year of the engine family, according to the definition in 40 CFR 90.3. (Example 2005)

6. Process Code (pull down menu)

Enter either "New Submission", "New Sub-Cont.", "Correction", "FEL Change", or "Running Change." Only enter "Running Change" if the engine family is already certified and you are submitting data to support a running change. "New Sub-Cont." is used when additional space is required on the original "New Submission." For example, it may be appropriate to use a "New Sub-Cont." process code when data for multiple engine models is being submitted.

7. Emission Label

a) *Will a name other than the manufacturer's name appear on the label? A "Yes" response should be checked whenever a name other than the manufacturer's name may appear on either the engine label or the supplemental label or both.*

b) List the engine family name which appears on the label. In cases where the manufacturer is using the option to carryover the old engine family name on the label, this response will be different from the response to #5.

8. Engine Family Name

Enter the engine family name. The name is composed of twelve letter and numeric characters formatted according to Appendix A of this guidance.

9. HC & NOx Waiver(s) (pull down menu)

Enter either a "Yes" or "No" whether a waiver for this particular engine is required. Waivers are available for engines used exclusively in snow throwers or ice augers.

10. Family Emission Limit

If the manufacturer is participating in averaging, banking, and trading, then family emission limits should be entered.

11. Projected 50 State Sales

Enter the number of engines in the engine family projected for sale in the U.S. (Federal + California) for this model year.

12. Estimated Production Period

List the anticipated beginning and end dates for the engine family's production. Date format is mm/dd/yyyy. The annual production period is defined in 40 CFR 90.106(b)(1). This information may be used to determine expiration of CBI claims which were made until introduction into commerce.

13. Valve Location/Porting Configuration (check box)

Specify side valve, overhead valve, or the type of intake porting utilized, such as reed valve, piston ported, or other. If other, please specify type. Please also check whether the engine is 2-stroke or 4-stroke.

14. Cooling Medium (pull down menu)

Indicate the medium employed actively to maintain the engine at an operational temperature, either "air" or "liquid" cooling.

15. Adjustable Parameters

If an engine family has any adjustable parameters as defined in 40 CFR 90.3, then please refer to 40 CFR 90.112 for the applicable requirements.

Test Info (Multiple Pages)

1. Model Designation of Test Engine

Enter the manufacturer's model number of the engine used for certification testing.

2. Test Engine Identification Number

List the test engine serial number.

3. Maximum Rated Power

Specify the maximum power in kilowatts (kW) and the corresponding revolutions per minute (RPM) of the test engine.

4. Test Cycle (pull down menu)

Indicate which test cycle was used, "A", "B", "C", "Special Test Procedure", "Alternate Test Procedure" or "Other", as described in 40 CFR 90.119(a) and Table 2 of Appendix A to Subpart E of 40 CFR 90. If "other," please specify type. If "Special Test Procedure," "Alternative Test Procedure," or other, the manufacturer must seek approval from EPA prior to testing.

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5. Test Location and Contacts

Indicate the location of the certification emission engine testing and the point of contact for the testing.

6. Certification Fuel (pull down menu)

Indicate the type of fuel used for the certification emission test. If “other” is chosen, specify the fuel type. In addition, if “other” is chosen, manufacturer must seek approval from EPA prior to testing. See the description in the main part of this document for more information.

7. Emission Sampling Method (pull down menu)

Indicate which emission sampling method was used to produce the test results, Raw Gas Method (RGM), Constant Volume Sampling (CVS), or other. If other, please specify the alternate method. In addition, if “other” is selected, the manufacturer must seek approval from EPA prior to testing.

8. Exhaust Emission Test Data

Enter emission test results for durability testing and certification testing in this section.

Cert Summary

1. Certification Levels

Official emission test results, DFs, and the certification levels (emission test results with applied DFs) should be included in this section.

Model Info

1. Model Designation (Table)

Enter each model in an independent row.

2. Displacement (Table)

Indicate the displacement of each model in the engine family in cubic centimeters. *Please do not leave blanks or use ditto marks.*

3. Maximum Power (Table)

Specify maximum power in kW for the model engine(s). *(Be sure correct units are listed in units box.)* The maximum power (maximum rated power)

should be the maximum point on a nominal power curve developed from the engine model's projected torque curve when a production engine is mapped according to EPA's mapping procedures.

4. Rated Speed (Table)

Enter the speed at which maximum power reported in #3 was achieved.

5. Emission Control Systems (Table)

Indicate which emission related devices are used for each model, utilizing Society of Automotive Engineers (SAE) abbreviations defined in SAE J1930.

Part Number Info

1. Part Number Description

Enter each model in the engine family in the row along the top of the table. For each part that applies to each model, enter the applicable part number.

Label/Warranty

1. Emission Control Label Information

A text box is provided to enter the emission control label information for the engine family.

2. Emission Control Warranty Statement

A text box is provided to enter the actual warranty statement for the engine family.

Comments

1. Additional Comments

A text box is provided to enter any additional information about the engine family which may be necessary for certification.



## Appendix D

### Confidential Business Information

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## **APPENDIX D: CONFIDENTIAL BUSINESS INFORMATION (CBI)**

As a general principle, information provided to EPA by individuals or companies will be considered public information and will be provided to those who request it unless the information falls under one of the exemptions listed in the Freedom of Information Act (the Federal statute which governs disclosure of information to the public). Material which is confidential or proprietary (e.g., trade secrets) may be exempted.

The Nonroad SI Engine certification template has built-in designated fields that are commonly considered to be CBI. Information in these fields will not be published on EPA's certification data website. EPA will not release such information to the public unless EPA determines under 40 CFR Part 2 that the information is not entitled to confidential treatment. Any information not marked as CBI in the template will be posted on the certification data website.

Any questions about this process should be addressed to:

Robert M. Doyle, Attorney-Advisor  
Heavy-Duty and Nonroad Engine Group  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave, NW (6405J)  
Washington, DC 20460  
Telephone (202) 343-9258  
Facsimile (202) 343-2804  
E-mail - [Doyle.Robert@epa.gov](mailto:Doyle.Robert@epa.gov)

## Appendix E

### Sample Label Wording

## APPENDIX E: SAMPLE LABEL WORDING

General engine label requirements are included in 40 CFR 90.114.

The following is a list of items which must be included on the permanent and legible label identifying each nonroad engine:

1. The heading "Important Engine Information"
2. The full corporate name and trademark of the engine manufacturer
3. Date of engine manufacture [day (optional), month and year] – this information may be excluded from the label if it is stamped on the engine and included in the owner's manual
4. The statement "This engine conforms to [model year] U.S. EPA regulations for small nonroad engines."
5. EPA standardized engine family designation
6. Engine displacement [in cubic centimeters]
7. Other information concerning proper maintenance and use or indicating compliance or noncompliance with other standards may be indicated on the label
8. For Phase 2 engines, the useful life category as determined by the manufacturer pursuant to 40 CFR 90.105. Such useful life category shall be shown by one of the following two statements to be appended to the statement "This engine conforms to [model year] U.S. EPA regulations for small nonroad engines."
  - a. "EMISSIONS COMPLIANCE PERIOD: [useful life] HOURS"
  - b. "EMISSIONS COMPLIANCE PERIOD: CATEGORY [fill in C, B or A as indicated and appropriate from the tables in 40 CFR 90.105], REFER TO OWNER'S MANUAL FOR FURTHER INFORMATION"

The following is a list of items which may be omitted from the label and included in the owner's manual if there is insufficient space on the engine:

1. The statement "This (specify vehicle or engine, as applicable) is certified to operate on (specify operating fuel(s))."
2. Identification of the Exhaust Emission Control System (Abbreviations may be used and must conform to the nomenclature and abbreviations provided by the Society of Automotive Engineers procedure J1930, "Electrical/Electronic Systems Diagnostic Terms, Definitions, Abbreviations, and Acronyms," September 1991.
3. All engine lubricant requirements

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The following is a sample emission label which conforms to these requirements:

Important Engine Information
Company XY, inc This engine is certified to operate on gasoline. This engine conforms to 2006 U.S. EPA regulations for small nonroad engines. EMISSIONS COMPLIANCE PERIOD: 500 HOURS Engine Family: 6XYXS.1451AB Engine Displacement: 145 cc Date of Manufacture: 4/2006 Exhaust Emission Control: TWC Lubricant Requirements: SF15W-40

If a manufacturer wants to modify the label (according to 40 CFR 90.114), then the manufacturer must submit in writing a request for an alternate label. Requests for alternate labels should be directed to the certification representative listed in the body of this guidance document. The following is guidance on engine label wording when engines are certified to meet only federal regulations or both California and federal regulations:

#### Federal-Only Label

Labels indicating compliance with federal regulations only should follow wording specified at 40 CFR 90.114(c)(7):

“This engine conforms to (model year) U.S. EPA regulations for small nonroad engines.”

As an option, the manufacturer may substitute PH1 or PHASE 1 (PH2 or PHASE 2, PH3 or PHASE 3, etc.) for model year.

#### Common California and Federal Label

To indicate that a CARB certified engine also meets federal standards, the label should read as follows:

“This engine conforms to U.S. EPA PH2 (or PHASE 2) and [DATES] California emission regulations for Small [Off-Road or Nonroad] engines.”

or

“This engine conforms to U.S. EPA PH2 (or PHASE 2) regulations for small nonroad engines and [DATES] California emission regulations for Small [Off-Road or Nonroad] engines.”

(Substitute PH2, PHASE 2, PH3, PHASE 3, etc. for PH1 or PHASE 1 wherever applicable.)

## Appendix F

# Sample Certificate of Conformity

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

200x Model Year Certificate of Conformity

Manufacturer: **ABC Inc.**  
Small SI Engine Family **xABCS.0685AA**  
Certificate Number: **ABC-NRSI-0x-42**  
HC+NOx FEL: g/kW-hr **68**  
Date Issued: **6/30/200x**

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Karl J. Simon, Acting Director  
Compliance and Innovative Strategies Division  
Office of Transportation and Air Quality

Pursuant to Section 213 of the Clean Air Act (42 U.S.C. section 7547) and 40 CFR 90, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued for the following small nonroad engine family, more fully described in the documentation required by 40 CFR 90 and produced in the stated model year. This certificate of conformity covers only those new small nonroad engines which conform in all material respects to the design specifications described in the documentation required by 40 CFR 90 and which are produced during the model year stated on this certificate. This certificate of conformity does not cover small nonroad engines imported prior to the effective date of the certificate.

This certificate of conformity is conditional upon compliance of said manufacturer with the averaging, banking and trading provisions of 40 CFR Part 90, Subpart C both during and after model year production. Failure to comply with these provisions may render this certificate void ab initio.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 90.126 and 90.506 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR 90. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void ab initio for other reasons specified in 40 CFR 90.

This certificate does not cover small nonroad engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.

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