



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

OFFICE OF
AIR AND RADIATION

June 17, 2008

CISD-08-08 (Stationary SI, NRSI)

Subject: Stationary Spark-Ignition Engine Certification

Dear Manufacturer:

As you may know, on January 18, 2008 EPA published final regulations that will affect new, modified, and reconstructed stationary spark ignition engines. EPA would like to take this opportunity to inform you of the certification process, contacts with whom you should work, and provide answers to general and technical questions that may arise as you begin the process. This letter will inform you of changes made to the way manufacturers complete a field in the small SI template, and the addition of three new fields in the Large SI template, to help manufacturers comply with the new certification requirements.

We will establish a new process for submitting small SI certification applications for mobile, combined mobile and stationary, and stationary only engines. Since stationary applications will be certifying using CFR Part 90 and will be similar to mobile applications, we have decided to use the existing small SI template for stationary applications. Enclosure A has the necessary information which needs to be included in a certification application. In addition, if a manufacturer is using the existing template for a stationary SI family submission there will be fields that are not applicable to stationary engines; those fields should be left blank. Enclosure B gives information about submitting certification applications to EPA and Enclosure C gives information about the first level certification reviewers for each industry and contact information. If you have any questions please contact Joe Hresko at hresko.joe@epa.gov or (202) 343-9275.

To accommodate the stationary engines mentioned above, and the optional standards offered in the regulations, EPA added three fields to the header of the Family page of the LSI template: (1) type of certificate desired, (2) values selected when certifying to optional standards, and (2) CFR section applicable to the values chosen in (2). Please contact Larry Oeler at oeler.larry@epa.gov or (202) 343-9289 if you have any questions. Templates for submitting applications have been available since March 3, 2008.

Enclosure D, "Instructions for Certifying Nonroad and Stationary Spark-Ignition Engines", contains more detailed certification instructions for manufacturers. The assigned deterioration factors available for small manufacturers are available during the first two years of this program; however they are subject to change pending review of additional data by the Agency.

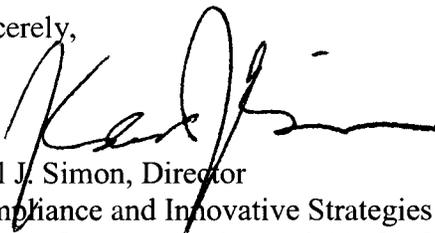
As you may know, the Office of Air Quality Planning and Standards and the Office of Transportation and Air Quality are working together on this program and this following information should serve to help give stakeholders a better understanding of who their contacts need to be. The rule sets emission standards and other requirements of which manufacturers and owner/operators of these engines need to be aware. The purpose of this letter is let you know who to contact in case that you have any particular questions related to the standards.

For questions related to:	Please contact:	Phone/E-mail
Certification of stationary SI engines greater than 19 kW	Michael Wolfe Office of Transportation and Air Quality	202-343-9539 wolfe.michael@epa.gov
Certification of stationary SI engines less than or equal to 19 kW	Joe Hresko Office of Transportation and Air Quality	202-343-9275 hresko.joe@epa.gov
	Michael Wolfe Office of Transportation and Air Quality	202-343-9539 Wolfe.michael@epa.gov
Applicability and compliance requirements for owners/operators	John DuPree Office of Compliance	202-564-5950 dupree.john@epa.gov
Clarification about regulations	Jaime Pagan Office of Air Quality Planning and Standards	919-541-5340 pagan.jaime@epa.gov
Requests for alternate or special test procedures	Connie Sue Oldham Office of Air Quality Planning and Standards	919-541-7774 oldham.conniesue@epa.gov

The regulation has important compliance dates that you need to be aware of that affect all new stationary spark-ignited engines. Please note that copies of the regulation and other documents related to the rulemaking process can be found online at <http://www.epa.gov/ttn/atw/nsps/sinsps/sinspspg.html>. If you have any questions, please do not hesitate to contact the people listed above. We will be glad to assist you in order to ensure that you have all the information that you need to sell, install, and operate compliant engines.

If you have any questions about these provisions, please contact your certification representative.

Sincerely,



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



Peter Tsirigotis, Director
Sector Policies and Programs Division
Office of Air Quality Planning and Standards

Enclosures

Enclosure A

Small SI certification application:

If the application is for a mobile engine place the word "mobile" in 5b

If the application is for a dual use engine place the words "dual-stationary/mobile" in 5b

If the application is for only for a stationary engine place the words "stationary only" in 5b

3. a. Model Year: _____
b. Process code: _____
c. Are you carrying over test results from a previously certified EPA engine family? _____
d. If yes, indicate the family name: _____
e. Is the family being certified identical to family test data is being carried over? _____

4. Emission Label:
a. Will a name other than the engine manufacturer's name appear on the label? _____
b. Engine Family Name of Label: _____

5a. EPA-Standardized Engine Family Name: _____
b. Manufacturer Own Engine Family Name: _____ Choices: mobile, dual-stationary/mobile, or stationary only

6. Is the Engine Family Used in Preempt Applications?: _____

7.a. Wintertime Product Only?: _____ (i.e., certified to CO standard only)
b. HC & NOx Waiver? _____

8a. Family Emission Limit (FEL): _____ HC+NOx
b. If "Yes", corporate average plan submitted (ARB only)? _____ CO

Effective Date FEL

Revised Header in LSI Template:

FAMILY	Test	Models	Parts	Tech Descr.	Compl. st.	MODEL YEAR 2008	SAVE PRINT
Manufacturer:						HC+NOx	CO
Engine category: Greater Than 19 Kw Nonroad SI						CHECK YOUR WORK	
Type of certificate desired: <input type="radio"/> mobile <input checked="" type="radio"/> stationary <input type="radio"/> both						SEND TO D/B	
Cert contact: first _____ last _____						OPEN D/B	
Part/Subpart <input type="radio"/> 1048.101(a)(3) <input checked="" type="radio"/> Part 60 applies to my values.						DELETE REC	
Contents Page		Date EPA Fee Paid: _____				Results of diagnostic	

Enclosure B

Submitting certification applications to EPA:

Use Application-CI_Cert@epa.gov email address for: On-hwy CI & SI, large nonroad CI engines, locomotive, marine CI and IMO, and evaporative submissions.

Use Application-SI_Cert@epa.gov email address for: small SI nonroad engines, large (>19kw) SI nonroad engines, marine SI, and snowmobile submissions.

Email Subject line: Engine category-manufacturer-Number of submissions & Process code

*Multiple engine family submissions must be the same industry and process code

Examples:

On-highway engines (CI & SI)

Email address: Application-CI_Cert@epa.gov

Example: Onhwy-ABC trucking-5 New submissions

Large nonroad CI engines

Email address: Application-CI_Cert@epa.gov

Example: NRCI-ABC trucking-4 Running changes

Locomotive engines

Email address: Application-CI_Cert@epa.gov

Example: LOC-ABC trucking-1 correction

Marine CI & IMO engines

Email address: Application-CI_Cert@epa.gov

Example: MCI-ABC trucking-2 New submissions

Evaporative

Email address: Application-CI_Cert@epa.gov

Example: EVAP-ABC trucking-2 New submissions

Nonroad small SI engines (<19kW)

Email address: Application-SI_Cert@epa.gov

Example: SORE-ABC trucking-2 FEL changes

Nonroad Large SI engines (>=19kW)

Email address: Application-SI_Cert@epa.gov

Example: LSI-ABC trucking-2 Corrections

Marine SI engines

Email address: Application-SI_Cert@epa.gov

Example: MSI-ABC trucking-20 New Submissions

Snowmobile engines

Email address: Application-SI_Cert@epa.gov

Example: Snow-ABC trucking-2 FEL Changes

Enclosure C

Certification contact information

1st level certification processors:

Foster Morrison- morrison.foster@epa.gov, P-202-343-9298, F-202-343-2804
Engine categories-large nonroad SI engines, Marine CI & IMO

Richard Deadwyler- deadwyler.richard@epa.gov, 202-343-9294, F-202-343-2804
Engine categories-On-hwy CI & SI, Nonroad CI, Evaporative

Michael Marko- marko.michael@epa.gov, 202-343-9536, F-202-343-2804
Engine categories-Marine SI, nonroad small SI, and snowmobile

Mailing address:

(Regular mail)

**Engine Programs Group
US EPA
1200 Pennsylvania Ave. NW (6403J)
Washington DC 20460**

(Express mail)

**Engine Programs Group
US EPA
1310 L. St., NW (6403J)
Washington, DC 20005**

Other certification information:

Certification templates can be found at:
<http://www.epa.gov/otaq/certdat2.htm>

Certification data can be found at:
<http://www.epa.gov/otaq/certdata.htm>

Filemaker software can be found at:
<http://www.filemaker.com>

Enclosure D

Instructions for Certifying Nonroad and Stationary Spark-Ignition Engines

40 CFR Part 90 (Less than or Equal to 19 Kilowatts)

40 CFR Part 1048 (Greater than 19 Kilowatts)

40 CFR Part 1068 (General Compliance Provisions for Nonroad Programs)

40 CFR Part 60 (Stationary Engines)

June 2008

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

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I. Introduction

This document provides information on preparing, submitting, and revising certification applications for new Nonroad and Stationary Spark-Ignition (SI) engines at or below 19 kilowatts (kW), and new Nonroad and Stationary SI engines above 19 kW (hereafter referred to as Small SI and Large SI Engines, respectively). The federal regulations that govern the Nonroad Small SI and Nonroad Large SI engines are part of Title 40 of the Code of Federal Regulations (CFR), Part 90 and Part 1048, respectively. Note that Large SI engines are also subject to the general compliance provisions outlined in 40 CFR Part 1068 and that Large SI and Small SI engines may also be certified as Stationary SI engines in accordance with the provisions under 40 CFR Part 60. Refer specifically to 40 CFR 90.1 or 1048.1 to determine whether this regulation is applicable. Both Small SI and Large 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 U.S. Environmental Protection Agency (EPA).

Manufacturer certification of engines minimizes the testing, monitoring, recordkeeping and reporting burden on owners/operators of certified Stationary SI engines as long as the engines are operated and maintained according to the engine manufacturer's operation and maintenance procedures with respect to emissions and fuel. For Stationary SI engines subject to 40 CFR Part 60 (Subpart JJJJ), some additional certification requirements apply. These requirements are discussed in Section III below. For certain types of Stationary SI engines rated above 19 kW or 25 horsepower (HP), certification is voluntary (all Stationary SI engines rated at or below 19 kW are subject to mandatory certification). Table 1 in Appendix G provides a summary of which categories (based on engine size, type, and fuel) are subject to mandatory versus voluntary certification. For those engines subject to voluntary certification, Table 4 provides a summary of which provisions in 40 CFR Parts 1048, 1065, and 1068 are applicable.

It is also important to note that data for certification is currently being received by electronic mail, however the Agency policies and procedures for receiving confidential business information are being updated. This will require implementation of a modified procedure for transfer of such data to the Agency in future certification years. An update will be provided that will govern data submission as it relates to the certification procedures.

The certification procedures and requirements for Small SI and Large SI engines (including Stationary SI engines) are summarized in the following sections. Please consult the regulations for further information regarding these requirements, including any exceptions and temporary provisions that may apply for a particular engine.

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 SI or Large SI 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, the Agency 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 two web pages listed to below to request a manufacturer code and create Verify user accounts:

- <http://epa.gov/otaq/verify/mfr-code.htm#new>
- <http://epa.gov/otaq/verify/setup.htm>

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 sent by regular U.S. mail to:

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

Note that all mail delivered to the 1200 Pennsylvania Avenue address will not reach the Heavy-Duty and Nonroad Engine Group (HDNEG) immediately (delivery may take a few weeks) and Express Mail to this address will be returned to sender.

For Express Mail deliveries, use the following address:

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

Note that regular U.S. mail delivered to the 1310 L St. address will be returned to sender.

Initial questions should be directed to Mike Marko at one of the above addresses. Mr. Marko can be reached at 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. 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

For certain Stationary SI engine sizes and types (see Table 1 in Appendix G), certification is voluntary (see provisions at 40 CFR Part 60, Subpart JJJJ). Stationary SI engines that are not certified by engine manufacturers would run in the field as non-certified engines and the owner/operator may be subject to performance testing of the non-certified engines at least once (and would possibly be subject to subsequent testing) to demonstrate compliance with the Part 60 emission standards and the associated recordkeeping requirements.

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 for Small SI engines are included in 40 CFR 90.116(d). The criteria for selecting engine families for Large SI engines can be found at 40 CFR 1048.230. Once the engine family groupings have been selected, an engine family name should be created using the instructions in EPA's Dear Manufacturer Letter that outlines the standard naming conventions. These conventions were recently revised for model year 2009 engine families and beyond. This new Dear Manufacturer Letter (CISD-07-03) can be found within the list of EPA Vehicle Programs and Compliance Guidance Letters at <http://www.epa.gov/otaq/cert/dearmfr/dearmfr.htm> and is included as Appendix A.

Note that in accordance with 40 CFR 60.4242(b), Stationary SI engines that are certified to standards identical to those under 40 CFR Part 90 or Part 1048 may be combined and certified along with the corresponding Nonroad Small SI or Nonroad Large SI engines within the same engine family. An engine family that covers both Stationary SI and Nonroad Small SI engines may also be included in the averaging, banking and trading provisions under 40 CFR Part 90, Subpart C.

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 for Small SI and Large SI engines in 40 CFR 90.107 and 1048.201(e) and 1048.205, respectively. A sample statement of compliance is included in Appendix B.

The signed statement of compliance should be mailed to your EPA manufacturer contact. The signed statement of compliance signifies manufacturer understanding and acceptance of the emission standards and other requirements of 40 CFR 60, 40 CFR 90 or 40 CFR 1048, as applicable. Note that the Phase 1 and Phase 2 standards for Nonroad SI Engines are included in 40 CFR 90.103 and the relevant Tier 1 and Tier 2 standards for Large SI engines are included in 40 CFR 1048.101. The numerical emission standards applicable to Stationary SI engines are referenced in 40 CFR 60.4231. In the statement of compliance, manufacturers should specifically refer to the set of regulations with which the engine complies.

D. FileMaker Pro Application

Engine family certification information should be submitted using the applicable Small SI or Large SI FileMaker Pro application template created by EPA for Nonroad SI Engines. A zip file including the files for these templates and installation instructions can be found at the following website: <http://www.epa.gov/otaq/certdat2.htm>. The zip files for Small SI and Large SI Engines are both located in the "Engine Certification Templates" table on the web page. Additional instructions on how to use the templates are also included below the table on the same web page.

For further instruction on how to complete the FileMaker Pro Application, please refer to Appendix C, which can be used to complete either the Small SI or Large SI certification templates. For Stationary SI engines, use the applicable template based on the engine power rating, type of certification fuel, and emergency or non-emergency application.

E. Confidential Business Information (CBI)

Information which is to be considered CBI is clearly marked in both the Small SI and Large SI FileMaker Pro templates. The templates are designed such that only non-CBI information is entered into the file when each Small SI or Large SI engine manufacturer's certification data are 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, 40 CFR 90.4 (for Small SI engines), and 40 CFR 1048.815 (for Large SI engines).

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 Small SI Engine classes are defined in 40 CFR 90.105 and each Small SI Engine class is defined in 40 CFR 90.116. The useful life periods for Large SI engines are specified in 40 CFR 1048.101(g).) 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 for Small SI engines. The criteria for developing DFs for the Large SI exhaust emission standards and the evaporative emission standards are included in 40 CFR 1048.240(c) and 1048.245(c), respectively. For Small SI engines, 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 for Small SI engines is described in 40 CFR 90.118 and 40 CFR 90.408. Small-volume manufacturers of Large SI engines may also use EPA-assigned DFs in lieu of developing DFs based on actual service accumulation and the associated emissions data. (Refer to the Q&A document in Appendix H.)

For manufacturers of Stationary SI engines participating in the voluntary certification program, compliance with the DF provisions under 40 CFR 1048.205(n) and 1048.240 is required for engines built on or after January 1, 2010 per 40 CFR 60.4247(c). However, for engines built prior to that time, manufacturers may develop their own DF's based on engineering analysis.

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 Small SI engines to be certified. Please refer to 40 CFR Part 90, Subpart E for information about certification testing as allowed in the regulations. The test procedures for Large SI engines are included in 40 CFR 1048, Subpart F, and in 40 CFR 1065. The applicable test cycles for Large SI engines can be found at 40 CFR 1048.505 and 1048.510 for steady-state and transient duty cycles, respectively. Field testing procedures are outlined in 40 CFR 1048.515. Note that for compliance with the evaporative emission standards, manufacturers of Large SI engines may use design-based certification as outlined in 40 CFR 1048.245 or run diurnal testing per 40 CFR 1048.505(e).

Stationary SI engines subject to the voluntary certification and test procedures in 40 CFR 60, are required to follow the test requirements described in 40 CFR 60.4241(b)..

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 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 for Small SI engines and 40 CFR 1048.501(f) for Large SI engines. Special or alternate test procedures may include the use of alternate fuels; test cycles which differ from those described in 40 CFR Part 90, Subpart E or in 40 CFR Part 1048, Subpart F, 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 for Nonroad Small SI engines 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 Part 90, Subpart D, Appendix A, Table 3. The second option is to use the fuel specified in 40 CFR Part 1065, Subpart H for gasoline-fueled engines (see 40 CFR 1065.710). 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 Small 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). For fuel type information for Nonroad Large SI engines, refer to 40 CFR 1048.101(e).

Stationary SI engines should generally use a certification fuel that is consistent with the corresponding Nonroad Small SI or Nonroad Large SI requirements in Part 90 or 1048, respectively. However, if a manufacturer participates in the voluntary certification program, they should refer to 40 CFR 60.4241 for fuel specifications.

I. Data Carry Over

Under 40 CFR 90.119(c) for Small SI engines and 40 CFR 1048.235(d) for Large SI engines, 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 of Small SI engines 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. The term "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. Note that there is no ABT program for Large SI engines.

K. Labeling

The required content of the engine label for Nonroad Small SI engines 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 Small SI engine labels should be referenced on the Small SI 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 Small SI 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 engine label language. Note that the Small SI 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 Small SI 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 SI 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 the 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.

For Large SI engines, the required label information is included in 40 CFR 1048.135(c).

Stationary SI engines that are subject to voluntary certification and thus, comply with the provisions in 40 CFR 60.4247, must be clearly labeled as certified or non-certified (see 40 CFR 60.4241(c)). If Stationary SI engines are certified to 40 CFR Part 1048, the label must reference stationary engines, in lieu of (or in addition to) nonroad engines. In accordance with 40 CFR 60.4242(a) and (c), manufacturers may apply a separate Stationary SI engine label or may add the phrase "and stationary" after the word "nonroad" to the label. Note that certain engines certified as emergency use only must have a label identifying the engine as such (see 40 CFR 60.4242(d)).

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 summary of the labeling requirements for Small SI and Large SI engines as well as a sample Nonroad Small SI 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 (CD) 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 and should format the subject line to read as follows:

Subject: Engine Category - Manufacturer - Number of Submissions and Process Code.

Note that process codes may include the following options: New Submission, FEL Change, Correction, or Running Change.

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

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 email the manufacturer's primary contact. The EPA contact may also call or email 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 2009 Model Year is issued on October 31, 2007, the effective date of the certificate would be January 2, 2008.

The certificate of conformity is signed by the Director of the Compliance and Innovative Strategies Division (CISD) 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 emailed 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 email) 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 that was used 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 for Small SI engines and 40 CFR 1048.225 for Large SI engines, 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 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 to Small SI engines as described in 40 CFR 90.122(e), is similar to the optional notification procedure used by on-highway manufacturers. For Large SI engines, the provisions at 40 CFR 1048.225(e), allow manufacturers to start producing the new or modified nonroad engine anytime after they send the request. While these procedures do not eliminate EPA review, they do 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



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 26 2007

OFFICE OF
AIR AND RADIATION

CISD-07-03 (LDV/LDT/MDPV/LIMO/HD-HWY/CI-DIESEL/
MC/ICI/LARGE SI/MARINE/<25 HP LOCOMOTIVE)

Dear Manufacturer:

SUBJECT: EPA Standardized Naming Conventions for Model Year 2009 and Later Engine Family and Test Group Names, Evaporative/Refueling Family Names, and Permeation Family Names

The purpose of this letter is to inform you of changes being made to EPA's naming conventions for engine family and test group names and evaporative and refueling family names and to introduce the naming convention for the new permeation families which are now required for highway motorcycles and recreational vehicles. First, we are updating the list of model year codes which is used in position 1 of all the family names to include codes for model years beyond 2009. Second, we are making changes to the list of industry sector codes which is in position 5 of all the family names. Third, we are providing the naming convention for the new EPA Permeation Family names for highway motorcycles and recreational vehicles including nonroad motorcycles, all-terrain vehicles, and snowmobiles.

A complete description of all 12 characters of engine family/test group names, evaporative/refueling family names, and permeation family names for all industries is included with this letter for your reference. Examples of the various family names can be found in the enclosure with this letter.

The California Air Resources Board (ARB) has indicated a need for additional information to be included in the family names to help identify industry sectors that have unique requirements. This will be accomplished by reserving position 10 of the family names for California-unique codes. These additional codes for position 10 will be identified by ARB in a separate ARB guidance letter.

If you have any questions, please contact your certification team representative.

Sincerely,



Karl J. Simon
Acting Director
Compliance and Innovative Strategies Division

Enclosure

Internet Address (URL) • <http://www.epa.gov>

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I. Standardized Naming Convention for Engine Family Names (referred to as Test Groups for light-duty vehicles and trucks)

Position 1: Model Year Codes

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

Positions 2-4: Code Assigned by EPA for Each Manufacturer

Insert the 3-character alphanumeric EPA manufacturer code assigned to your company in positions two through four of the engine family name.

Position 5: Industry Sector Codes (Formerly called “Family Type Code”)

- A - California-Only Medium-Duty Vehicles
- B - Large Nonroad Spark-Ignition Engines (>19 kiloWatts)
- C - Highway Motorcycles
- D - Complete Heavy-Duty Highway Vehicles (8,500 to 14,000 pounds GVWR; tested on chassis dynamometer)
- E - Heavy-Duty Highway Otto-Cycle Engines (>8500 pounds GVWR)
- F - *(Reserved for Heavy-duty Evaporative Families)*
- G - Locomotives (freshly manufactured)
- H - Heavy-Duty Highway Diesel-Cycle Engines (>8,500 pounds GVWR)
- I - *(Reserved- not to be used)*
- J - Light-Duty Vehicles and Light-Duty Trucks/Medium-Duty Passenger Vehicles
- K - Locomotives (remanufacture system)
- L - Nonroad Compression-Ignition Engines
- M - Marine Spark-Ignition Engines
- N - Marine Compression-Ignition Engines
- O - *(Reserved- not to be used)*
- P - *(Reserved for EPA Permeation Families)*
- Q - *(Reserved- not to be used)*
- R - *(Reserved for Light-Duty Evaporative/Refueling Families)*
- S - Small Nonroad Spark-Ignition Engines (\leq 19 kiloWatts)
- T - Light-Duty Trucks / Medium-Duty Passenger Vehicles
- U - *(Reserved for California ARB’s Highway Motorcycle Evaporative Families)*
- V - Light-Duty Vehicles
- W - Marine IMO
- X - Nonroad Motorcycles / All-Terrain Vehicles
- Y - Snowmobiles
- Z - *(Reserved- not to be used)*
- 0 - California ARB’s Zero-Emission Vehicles
- 1 - California ARB’s Complete Heavy-duty Highway Vehicles (>14,000 pounds GVWR; tested on chassis dynamometer; for example, California’s hybrid urban bus and heavy-duty vehicle option)

Positions 6-9: Engine Displacement

Insert the applicable engine displacement for each engine family/test group. Engine displacement units may be in liters (XX.X or .XXX), cubic inches (XXXX), or cubic centimeters (XXXX) according to the industry sectors below. For dual or variable displacement families, enter the maximum displacement. If the displacement is given in liters, the decimal point counts as a digit. In all cases the displacement will be read in liters if a decimal point is included and it will be read in cubic inches or cubic centimeters if there is no decimal point.

- Engine displacement should be provided in Liters for the following industry sectors:
 - A - California-Only Medium-Duty Vehicles
 - B - Large Nonroad Spark-Ignited Engines (>19 kiloWatts)
 - D - Complete Heavy-Duty Highway Vehicles (8,500 to 14,000 GVWR; tested on chassis dynamometer)
 - J - Light-Duty Vehicles and Trucks/Medium-Duty Passenger Vehicles
 - N - Marine Compression-Ignition Engines
 - T - Light-Duty Trucks / Medium-Duty Passenger Vehicles
 - V - Light-Duty Vehicles
 - W - Marine IMO
 - Y - Snowmobiles
 - 1 - California ARB's Complete Heavy-duty Highway Vehicles (>14,000 pounds GVWR; tested on chassis dynamometer; for example, California's hybrid urban bus and heavy-duty vehicle option)

- Engine displacement should be provided in Liters or Cubic Inches for the following industry sectors:
 - E - Heavy-Duty Highway Otto-Cycle Engines (>8500 pounds GVWR)
 - G - Locomotives (freshly manufactured) – liters (engine total) or cubic inches (per cylinder)
 - H - Heavy-Duty Highway Diesel-Cycle Engines (>8,500 pounds GVWR)
 - K - Locomotives (remanufacture system) – liters (engine total) or cubic inches (per cylinder)
 - L - Nonroad Compression-Ignition Engines
 - M - Marine Spark-Ignition Engines

- Engine displacement should be provided in Liters or Cubic Centimeters for the following industry sectors:
 - C - Highway Motorcycles
 - S - Small Nonroad Spark-Ignition Engines (≤19 kiloWatts)
 - X - Nonroad Motorcycles / All-Terrain Vehicles

Position 10: Engine Class (Only when Position 5 equals "S")

If the engine family name is for a small nonroad spark-ignited engine, with "S" in the 5th position of the engine family name, insert into position 10 the applicable code from the following list designating the engine class as specified at 40 CFR 90.116(b). All other industry sectors should follow the instructions for Positions 10 through 12 below.

- 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
- 1 - Class I: Nonhandheld equipment engines greater than or equal to 100 cc and less than 225 cc in displacement
- 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: Hand held equipment engines greater than or equal to 50 cc in displacement

Position 10: Reserved For Use By California ARB For Select Industry Sectors

The California ARB intends to issue separate guidance that will designate codes for position 10 of the engine family name for some industry sectors in order to help identify those industry sectors that have unique ARB requirements. Only positions 11 and 12 will then be available for the manufacturer-designated sequence characters as described below.

Positions 10-12: Sequence Characters (Only Positions 11-12 When Position 5 Equals "S" Or For Any Industry Sectors With ARB-Designated Codes For Position 10)

Enter any combination of valid characters in positions 10 through 12 in order to provide a unique identification for an engine family name. At a minimum, the sequence characters, in combination with the other characters in the engine family name, must provide a unique identifier for each engine family name for a manufacturer for each model year. Further, it is recommended that numbers and letters be selected that minimize possible confusion. The sequence characters themselves could be used to represent other information such as the applicable EPA or California emission standards, however EPA will treat these as simple sequence characters with no additional meaning.

If the engine family name is for small, nonroad spark-ignition engines, with "S" in the 5th position of the engine family name or is for an industry sector for which ARB has designated codes for position 10, only two characters will be available for the sequence characters.

II. Standardized Naming Convention for Evaporative and Refueling Family Names

Position 1: Model Year Codes

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

Positions 2-4: Code Assigned by EPA for Each Manufacturer

Insert the 3-character alphanumeric EPA manufacturer code assigned to your company into positions 2 through 4 of the evaporative/refueling family name.

Positions 5: Industry Sector Codes (Formerly called “Family Type Code”)

- F - Heavy-Duty Evaporative Family
- R - Light-Duty Evaporative / Refueling Family
- U - California ARB’s Highway Motorcycle Evaporative Family

Positions 6-9: Canister work capacity

Identify the total capacity in grams of all canisters

Position 10: Reserved For Use By California ARB For Select Industry Sectors

The California ARB intends to issue separate guidance that will be applicable for some industry sectors that will designate codes for position 10 of the evaporative family name in order to help identify those industry sectors that have unique ARB requirements. Only positions 11 and 12 will then be available for the manufacturer-designated sequence characters as described below.

Positions 10-12: Sequence Characters (Only Positions 11-12 For Any Industry Sectors With ARB-Designated Codes For Position 10)

Enter any combination of valid characters in order to provide a unique identification for the evaporative/refueling name. At a minimum, the sequence characters, in combination with the other characters in the evaporative family name, must provide a unique identifier for each evaporative family name for a manufacturer for each model year. Further, it is recommended that numbers and letters be selected that minimize possible confusion. The sequence characters themselves could be used to represent other information such as the applicable EPA or California evaporative emission standards, however EPA will treat these as simple sequence characters with no additional meaning.

If the evaporative family name is for an industry sector for which ARB has designated values for position 10, only two characters will be available for the sequence characters.

III. Standardized Naming Convention for Permeation Family Names

Beginning with model year 2008, new permeation emission standards are now required by EPA for highway motorcycles and recreational vehicles which include nonroad motorcycles, all-terrain vehicles, and snowmobiles. This is in addition to evaporative families which are required by California ARB. Permeation emissions are fuel emissions that result from permeation of fuel through the fuel system components, such as fuel tanks and fuel hoses or tubing designed to contain liquid fuel or fuel vapor. Below is EPA’s naming convention for permeation family names for model year 2009 and later. It is optional for model year 2008.

Position 1: Model Year Codes

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

Positions 2-4: Code Assigned by EPA for Each Manufacturer

Insert the 3-character alphanumeric EPA manufacturer code assigned to your company into positions two through four of the permeation family name.

Position 5: Industry Sector Codes (Formerly called “Family Type Code”)

P - EPA Permeation Family

Positions 6-10: For Metal Fuel Tanks Only

METAL – Metal fuel tank

If this permeation family has a metal fuel tank, insert “METAL” into positions 6 through 10 of the Permeation Family name and proceed to Position 11 of the permeation family naming convention. If the fuel tank is any other material than metal, proceed to the description of position 6 below.

Position 6: Fuel Tank Material Type (For all materials except for Metal)

P - Plastic

F - Fiberglass

Position 7: Fuel Tank Evaporative/Permeation Emission Control Strategy (For all materials except for Metal)

- 0 - No Barrier
- 1 - Inherently Low/Zero Permeation Material
- 2 - Continuous multi-Layer with Permeation Barrier
- 3 - Non-Continuous Barrier Platelets
- 4 - Barrier Surface Treatment (e.g. fluorination, sulfonation)
- 5 - Other Permeation Control Technology

Positions 8-9: Least Thickness of Tank Wall or Least Weight Percentage (%) of Barrier materials within the Group of Fuel Tanks (For all tank materials except Metal)

For tanks with no barrier (i.e., values of 0, 1, 4, or 5 for Position 7: Control Strategy), enter the least nominal tank wall thickness, rounded to the nearest millimeter (mm) in the format of 01 to 99.

For tanks with a barrier (i.e., values of 2 or 3 for Position 7: Control Strategy), enter the least weight percentage (wt.%) of barrier material within the group of fuel tanks in the format of 01 to 99.

Position 10: Fuel Tank Production Method (For all tank materials except Metal)

- B - Blow-Molded Tank
- T - Thermoformed Tank
- R - Rotational Molded Tank
- J - Injection Molded Tank
- O - Other Production Method

Positions 11-12: Sequence Characters

Enter any combination of valid characters (letters and/or numbers) to provide a unique identification for the permeation family name. At a minimum, the sequence characters, in combination with the other characters in the permeation family name, must provide a unique identifier for each permeation family name for a manufacturer and model year. It is recommended that numbers and letters be selected that minimize possible confusion.

IV. Examples**A. Sample Engine Family/Test Group Names:**

9XYXS01451AB = Company XY has a 2009 model 145.2-cc, gasoline-fueled, Otto-cycle engine that will power a walk-behind mower.

9 = 2009 model year

XYX = EPA manufacturer code for XY engine corporation

S = Small nonroad spark-ignited engine

0145 = Displacement in cubic centimeters

1 = Engine Class I non-hand held, less than 225 cc.

AB = 2-character code which uniquely identifies the family name.

9XYXV03.2ABC = Company XY has a 2009 model light-duty vehicle with a 3.2 liter engine.

9 = 2009 model year

XYX = EPA manufacturer code for XY corporation

V = Light-duty vehicle

03.2 = Displacement in liters

ABC = 3-character code which uniquely identifies the family name.

B. Sample Evaporative/Refueling Family Name:

9XYXF0150DC4 = Company XY has a 2009 heavy-duty gas evaporative family with a canister working capacity of XXXX grams.

9 = 2009 model year

XYX = EPA manufacturer code for XY engine corporation

F = Heavy-duty gas evaporative family

0150 = Canister working capacity in grams

DC4 = 3-character code which helps to uniquely identify this family.

9XYXR0150AA1 = Company XY has a 2009 light-duty evaporative/refueling family with a canister working capacity of 150 grams.

9 = 2009 model year

XYX = EPA manufacturer code for XY corporation

R = Light-duty evaporative/refueling family

0150 = Canister working capacity in grams

AA1 = 3-character code which helps to uniquely identify this family.

C. Sample Permeation Family Names:**Metal Tanks:**

9XYLPMETALA1 = Company XY has a 2009 permeation family with a metal fuel tank.

9 = 2009 model year

XYL = EPA manufacturer code for XY corporation

P = Permeation family

METAL = Metal fuel tank

A1 = 2-character code which is used by the manufacturer to uniquely identify the permeation family name.

Plastic Tanks

9XYLPP202TC1 = Company XY has a 2009 permeation family that consists of a multi-layer plastic fuel tank with 2% weight of permeation barrier of EVOH material and manufactured by thermoforming.

9 = 2009 model year

XYL = EPA manufacturer code for XY engine corporation

P = Permeation family

P = Plastic fuel tank

2 = Continuous multi-layer with permeation barrier

02 = Least barrier weight % of 2%

T = Thermoformed fuel tank

C1 = 2-character code which is used by the manufacturer to uniquely identify the permeation family name.

Appendix B

Sample Statement of Compliance

Appendix B: Sample Statement of Compliance for Small SI Engines

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 8XYES.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

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.

Sample Statement of Compliance for Large SI Engines

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 8XYEB.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 subpart F of 40 CFR 1048 and under 40 CFR Part 1065, and that on the basis of such tests the engine(s) conforms to the requirements of 40 CFR Parts 1048, 1065, and 1068. I further certify that all engines in this engine family comply with all applicable requirements of 40 CFR Parts 1048, 1065, and 1068 and the Clean Air Act.

Sincerely,

[MANUFACTURER PRIMARY CONTACT]

SIGNATURE

Enclosures

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 Forms

Appendix C: Instructions for Completing Certification Application Forms for Small SI and Large SI Engines

I. Confidential Business Information (CBI)

Certain items on the FileMaker Pro Template for both Small SI and Large SI engines 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.

II. 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 certain forms. For the Small SI template, the forms subject to the diagnostic check include Family Information, Test Information, Certification Summary, Label/Warranty Information, and Model Information. For the Large SI template, the forms subject to the diagnostic check include Family Information, Test Information, Model Summary, and Part Number Summary. 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.

III. Small SI Engines

A. Family Information (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, Email, 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, email, 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 & NO_x 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.

B. 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.

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.

C. Certification Summary

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

D. Model Information

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.

E. Part Number Information

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.

F. 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.

G. Comments

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

IV. Large SI Engines

A. Family Information

1. Manufacturer Name
2. Model Year (4 digit model year of the engine family)
3. Type of Certificate Desired

Select mobile, stationary, or both. Also specify whether Part 1048 or 60 applies.

4. Contact Person, Address, Phone, Email, 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.

5. EPA Engine Family name and trade name

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

6. Process Code (pull down menu) and description

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. Enter description of correction or running change, if applicable.

7. Carryover indication (Yes or No)

8. Equipment Applications

Enter the equipment type(s) that are associated with the engines being produced within the engine family.

9. Sales Area and Projected Sales

Select 49-state, California, or 50-state to indicate where the engines/equipment will be sold. Enter in projected sales for the applicable sales area.

10. Production Engine Description and Characteristics

Enter the production engine description as well as selections for the engine characteristics, including family displacement(s), power ratings, engine type (reciprocating or other), 2-stroke/4-stroke, valve type, number of valves, engine cooling fluid, number of cylinders, cylinder arrangement, fuel system type, fuel, fuel metering device, number of devices, emission control system (select from options listed), O₂ sensor, aspiration type, and aftercooling type.

11. Contact Information

Enter the contact person and information to whom the certificate should be sent as well as the official certification representative.

12. Production date range

Enter the start date and the end date for engine production.

13. Manufacturing Plant Location

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

14. Useful Life

Enter the applicable useful life for the engine family. The useful life periods for Large SI engines are specified in 40 CFR 1048.101(g).

15. Family Averaging or Alternative Standards

Indicate whether the engines in the engine family will be subject to family averaging as specified at 40 CFR 1048.145. Also indicate whether the engine family qualifies for the sever-duty standard of 130 g/kW-hr (CO).

B. Test Information

As with the Engine Family Information, ensure that the engine family and process code is entered at the top.

1. Emissions Data

Enter data for each listed data element for the engine tested, including the engine code, engine model, displacement, test engine identification number, rated power, rated speed, torque rating, torque speed, test fuel, indication of whether a special device was used, test procedure used, break-in hours, type of gas sampling, and evaporative results.

2. Durability Data

Enter the model of the durability engine tested as well as the engine identification number and hours accumulated.

3. Test Results

Enter the applicable standards and the test results (steady state and transient) for each parameter, including the dates on which the tests were conducted and the associated deterioration factors (DFs) tested.

4. Certification Levels

Apply DFs and enter rounded steady state and transient results.

C. Model Information

Enter each model in an independent row and the associated data, including: the engine code and model, sales code, displacement (in liters), and other data as indicated in the table.

D. Part Number Information

Enter the requested part number data in the table for each part associated with a specific engine model and code, such as the injection pump, injector, turbocharger, pressure regulator, oxygen sensor, supercharger, distributor, and other relevant parts. A complete list of parts for which data should be provided at a minimum is included above the table.

E. Technical Description

Enter data associated with the engine sensor and software controls. Also provide adjustable parameter information and AECDC descriptions as required by 40 CFR 1048.205(b)..

Appendix D

Confidential Business Information

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 templates for both Large SI and Small SI engines have 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
Email - Doyle.Robert@epa.gov

Appendix E

Label Requirements and Sample Label Wording

Appendix E: Label Requirements and Sample Label Wording

General engine label requirements are included in 40 CFR 90.114 for Small SI engines and in 40 CFR 1048.135 for Large SI engines. The following table lists the items which must be included on the permanent and legible label that is affixed to each nonroad engine. Most of the items listed below are required to be included on the label for both Small SI and Large SI engines. To the extent that these requirements differ, the columns to the right indicate whether the required item applies to Large SI, Small SI or both types of engines.

Engine Label Requirement	Small SI Engine	Large SI Engine
The heading "Important Engine Information"	X	
The heading "Emission Control Information"		X
The full corporate name and trademark of the engine manufacturer	X	X
The statement "This (specify vehicle or engine, as applicable) is certified to operate on (specify operating fuel(s))." ¹	X	X
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. ¹	X	X
All engine lubricant requirements ¹	X	X
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	X	X
The statement "This engine conforms to U.S. EPA regs for [model year]."	X	
The statement "This engine conforms to [model year] U.S. EPA regulations for large [nonroad and/or stationary]engines."		X
EPA standardized engine family designation	X	X
Engine displacement [in cubic centimeters]	X	
Engine displacement [in liters] and maximum brake power		X
The engine's useful life category ²	X	
The engine's useful life ³		X
Specification and adjustments for engine tuneups; show the proper position for the transmission during tuneup and state which accessories should be operating.		X
Other information concerning proper maintenance and use or indicating compliance or noncompliance with other standards ¹	X	X
The emission standards to which the engine has been certified		X

(cont.)

Engine Label Requirement (cont.)	Small SI Engine	Large SI Engine
The phrase "Constant Speed Only" or "Variable-Speed Only," if applicable.		X
The phrase "This engine is not intended for operation at less than 75 percent of full load." if the associated engine family has been certified only for high-load engines		X
The phrase "Blue Sky Series", as applicable (i.e., if engine is certified to the voluntary standards in 40 CFR 1048.140)		X
The phrase "This engine is not intended for operation at more than __ percent of full load." if the engine is certified under 40 CFR 1048.101(d) and the certification application includes information showing that in-use engines will experience infrequent high-load operation. ⁴		X

Notes:

¹ These items may be omitted from the label and included in the owner's manual if there is insufficient space on the engine.

² 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"

³ For Large SI engines, the useful life must be consistent with the criteria outlined in 40 CFR 1048.101(g).

⁴ As stated in 40 CFR 1048.135(d)(6), specify the appropriate percentage of full load based on the nature of the engine protection. Other statements may be added to discourage operation in engine-protection modes.

The following is a sample emission label for a Small SI engine 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 or 1048.135), 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) for Small SI engines. The Small SI label should read: "This engine conforms to (model year) U.S. EPA regulations for small nonroad engines." Note that as an option, the manufacturer may substitute PH1 or PHASE 1 (PH2 or PHASE 2, PH3 or PHASE 3, etc.) for model year. The Large SI label should read: "This engine meets U.S. Environmental Protection Agency regulations for (model year) large nonroad SI engines."

Common California and Federal Label

To indicate that a CARB certified Small SI 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

SAMPLE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

200x Model Year Certificate of Conformity for Small SI

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

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.

SAMPLE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

200x Model Year Certificate of Conformity for Large SI

Manufacturer: **ABC Inc.**
Small SI Engine Family **xABCB.0685AA**
Certificate Number: **ABC-NRSI-0x-42**
HC+NOx FEL: g/kW-hr **3.9**
Date Issued: **6/30/200x**

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), 40 CFR Part 1048, and 40 CFR Part 1068 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 1048 and 1068 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 Part 1048 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.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068.20 and Subpart E of 40 CFR 1068 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 1068. 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 1048 and 1068.

This certificate does not cover large 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.

Appendix G

Emission Standards Applicable to Stationary Nonroad SI Engine Manufacturers

Appendix G: Emission Standards Applicable to Stationary Nonroad SI Engine Manufacturers

Table 1
Summary of Standards Applicable to Engine Manufacturers

Engine Size/Type/Fuel	Location of Applicable Standard in 40 CFR	40 CFR Part 60 Citation	Certification Type
≤25 HP All Engines	Part 90	§60.4231(a)	Mandatory
>25 HP Gasoline	Part 1048	§60.4231(b)	Mandatory
>25 HP Rich Burn LPG	Part 1048	§60.4231(c)	Mandatory
25-100 HP Non-Emergency (except gasoline/rich burn LPG) ^a	Part 1048	§60.4231(d)	Voluntary
≥100 HP Non-Emergency (except gasoline/rich burn LPG) ^{b,c}	Part 60 Table 1 (see Table 2 below)	§60.4231(e)	Voluntary
25-130 HP Emergency	90.103 Phase 1 Class II	§60.4231(d)	Voluntary
≥130 HP Emergency (except gasoline/rich burn LPG)	Part 60 Table 1 (see Table 2 below)	§60.4231(e)	Voluntary
Landfill/Digester Gas	Part 60 Table 1 (see Table 2 below)	§60.4231(d) §60.4231(e)	Voluntary

Notes:

^a If the engine is manufactured prior to January 1, 2011, manufacturers may choose to certify these engines to the standards in Part 60 Table 1 applicable to engines with a maximum engine power greater than or equal to 100 HP and less than 500 HP.

^b Manufacturers may voluntarily certify their ≥100 HP Lean Burn LPG engines to Part 1048 instead of Part 60 Table 1 per §60.4231(e).

^c For stationary SI ICE with a maximum engine power greater than or equal to 100 HP (75 KW) and less than 500 HP (373 KW) manufactured prior to January 1, 2011, and for stationary SI ICE with a maximum engine power greater than or equal to 500 HP (373 KW) manufactured prior to July 1, 2010, manufacturers may choose to certify these engines to the certification emission standards for new nonroad SI engines in 40 CFR part 1048 applicable to engines that are not severe duty engines.

Table 2
Specific Part 60 Standards Applicable to Engine Manufacturers

Engine Size/Type/Fuel	Stage	Emission Standard (g/HP-hr)		
		NO _x	CO	VOC
≥100 HP Non-Emergency (except gasoline/rich burn LPG)	Stage 1	2.0	4.0	1.0
	Stage 2	1.0	2.0	0.7
≥130 HP Emergency (except gasoline/rich burn LPG)	Stage 1	2.0	4.0	1.0
Landfill/Digester Gas	Stage 1	3.0	5.0	1.0
	Stage 2	2.0	5.0	1.0

Appendix H

Questions and Answers

Appendix H: Q & A Regarding Stationary SI Certification

Q: Has EPA assigned deterioration factors for small-volume engine manufacturers of Stationary SI engines?

A: For small-volume engine manufacturers of engines certified under Part 1048 for use in mobile and stationary sources and mobile-only sources, we have developed the following multiplicative Tier 2 deterioration factors for all spark ignition applications:

Transient Cycle Deterioration Factors:

HC: 1.536

NOx: 3.583

CO: 2.846

Steady-State Deterioration Factors:

HC: 1.040

NOx: 5.359

CO: 1.434

These deterioration factors are applicable to stationary SI-only sources for small-volume engine manufacturers of engines certified under Part 1048. Manufacturers should note that these deterioration factors (dfs) are appropriate unless they are updated based on additional data the Agency may receive. At which time, the Agency may evaluate new data to determine their applicability for this sector and revise accordingly.

For engines certified under Part 90, small-volume engine manufacturers and small-volume engine families, as defined in 40 CFR 90.3, may use assigned deterioration factors from Table 1 and Table 2 of 40 CFR 90.104.

Q: What manufacturer code do we use for Stationary SI engines?

A: Refer to the section in the certification instructions regarding obtaining a manufacturer code. In the comments section of the manufacturer code request form, simply indicate “Stationary SI” and mark “Large NonRoad Spark Ignited” and “Small NonRoad Spark Ignited”, as applicable.

Q: If an engine family under 25 hp (or over 25 hp but less than 1 liter and 30 kW) is already certified under Part 90 do we need to do anything else? These engines could be used in stationary applications and may also be used in mobile applications.

A: You should submit an application as a “New Submission” to cover both the stationary and mobile applications for this engine family. The certificate will be different for stationary-only and stationary/mobile applications.

Q: Who are my contacts for the Stationary SI rule and certification?

A: You should refer to Dear Manufacturer Letter attached to these instructions.

Q: Manufacturers of emergency stationary SI ICE <130hp are to certify to 40 CFR 90. 40 CFR 90.105(a)(1) says “Engines with gross power output greater than 19 kW that have an engine displacement less than or equal to one liter that optionally certify under this part as allowed in 90.1(a), must certify to a useful life period of 1,000 hours.” While these emergency stationary engines are >19 kW they are not <=1 L. Does the 1000 hours still apply or does the manufacturer have the option of the 250 or 500 hour useful life periods?

A: Since the 1,000 hour useful life requirement is mandatory specifically for engines with gross power output greater than 19 kW (25 hp) and a displacement less than or equal to one liter, a stationary emergency engine >25 hp and < 130 hp with a displacement greater than one liter being certified under part 90 has the option to certify to useful life periods of 250, 500 or 1,000 hours.

Q: What are the labeling requirements for the emergency stationary SI engines? I did not see anything with respect to labeling in Part 60 for these engines so are those that certify to Part 90 to follow the Part 90 labeling requirements and those that certify to Part 1048 to follow the Part 1048 labeling requirements?

A: For engines subject to part 90, there are no additional labeling requirements for stationary engines. For engines subject to part 1048, the label needs to refer to stationary engines, rather than or in addition to nonroad engines, as appropriate. See 40 C.F.R. § 60.4242(a). The label requirements in Appendix E include this provision.

Q: Is commercial grade fuel acceptable for certification emission testing of stationary SI engines?

A: The fuel requirements are the same as for nonroad engines, so what’s good for nonroad is good for stationary. If this is related to natural gas engines, then we generally expect certification testing to be done on pipeline grade natural gas, but there are provisions in the regulations that allow for the use of other natural gas for certification testing if the manufacturer wishes to certify the engines for use on such fuel. Manufacturers of stationary engines being certified under the voluntary program should refer to 40 CFR 60.4241 for fuel specifications.

Q: If a stationary SI engine manufacturer certifies their engines as mobile, constant-speed only, do the emission standards (2.7 g/kW-hr HC+NOx and 4.4 g/kW-hr CO) in Part 1048 apply? Or, is it acceptable to certify to the higher emission standards (3.8 g/kW-hr HC+NOx and 6.5 g/kW-hr CO) specified for owner / operators?

A: A stationary SI engine manufacturer must certify their engine for use in either stationary SI –only applications or stationary / mobile applications. If the manufacturer certifies to Part 1048, then they must certify to the Part 1048 emission standards.

The higher standard (3.8 g/kW-hr HC+NOx and 6.5 g/kW-hr CO) applies only to owners/operators of non-certified natural gas engines in the 19 kW to 75 kW size range. These standards are not the appropriate limits for certification by manufacturers.

Q: If the lower standards apply, this is a penalty for companies that voluntarily choose to certify. Is it possible for entity seeking certification to voluntarily certify their engines to the higher standards?

A: No. See answer above.

Q: The final rule states that engines overhauled as part of a normal maintenance program are not considered “modified or reconstructed”. Does this mean that engines being rebuilt as a maintenance function do not need to have their emission control systems updated to compliant levels?

A: Modification is any change that results in increased emissions. Reconstruction is defined as a change that costs 50% or more of the original capital cost. If any of these definitions are met, then an engine previously not affected by the standards would be required to comply for stationary engines. The definitions of modification and reconstruction apply only to stationary engines. The definition of reconstruction is in 60.2 and the one for modification is in 60.15.

Q: What is the EPA specified test method for conducting owner-compliance source testing?

A: Specifications for testing by owners and operators are described in section 60.4244 of the regulations.

Q: Does EPA plan to provide any further clarification on the meaning of “Emergency Engine”?

A: The definition of emergency engine can be found in section 60.4248 of the regulations.