



Connecticut Department of Energy and Environmental Protection



National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (RICE Rule)



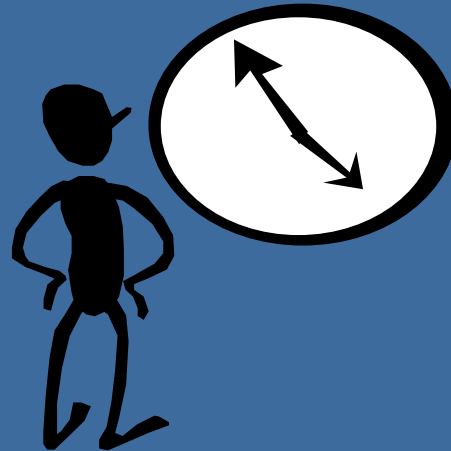
40 CFR 63 Subpart ZZZZ
Major Source New Landfill/Digester Gas Engine >500 Horsepower



Connecticut Department of Energy and Environmental Protection

Monitoring and Recordkeeping Requirements

- If your engine fires landfill or digester gas equivalent to 10% or more of the gross heat input on an annual basis, you must monitor and record fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. Also, you must operate in a manner which reasonably minimizes HAP emissions.



Notification Requirements

- Initial Notification only

- 120 days after effective date or construction/reconstruction

- Notification should include:

- Address (physical location) of the affected source
 - Relevant standard, or other requirement, that is the basis of the notification and the source's compliance date
 - Brief description of the nature, size, design, and method of operation of the source and the types of emission points within the affected source subject to the relevant standard and types of hazardous air pollutants emitted
 - Whether the source is a major or area source, and
 - Statement that your engine has no additional requirements, and explanation of the basis of the exclusion.

Example^a

Initial Notification of Applicability^b
National Emission Standards for Hazardous Air Pollutants:
Stationary Reciprocating Internal Combustion Engines
40 CFR part 63, subpart ZZZZ

Yes, I am subject to 40 CFR part 63, subpart ZZZZ National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

NAICS code(s): _____

Compliance Date: Existing (before 6/12/2006) source: Oct 19, 2013
 New/reconstructed (on or after 6/12/2006) source: Upon initial startup

Note: The Oct 19, 2013 compliance date for existing sources applies to the following engine types:

- Existing stationary spark ignition (SI) RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions
- Existing stationary SI RICE located at an area source of HAP emissions

Company name: _____

Facility name (if different): _____

Facility (physical location) address: _____

My facility is a (please choose one): Major source Area source

Owner name/title: _____

Owner/company address: _____

^a This is an example of the type of information that must be submitted to fulfill the Initial Notification of Applicability Status requirement of 40 CFR part 63, subpart ZZZZ. You may submit the information in another form or format, or you may use this form.
^b Initial Notification is due 120 days after the effective date (10/19/2010) of the rule or 120 days after you become subject to the rule.

Page 1 of 3



Reporting Requirements

- If the engine combusts landfill or digester gas equivalent to 10% or more of the gross heat input on an annual basis, you must submit an **annual** report containing:
 - Fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill or digester gas, is equivalent to 10% or more of the gross heat input on an annual basis; and
 - Operating limits provided in your permit, and any deviations from these limits; and
 - Any problems or errors suspected with the meters.
- The first report must cover the period beginning on the compliance date and ending on December 31st of the same year, and must be postmarked by January 31st
- Each subsequent report must cover the period from January 1st through December 31st, and must be postmarked or delivered by the following January 31st.
- If the state permitting authority has established alternate report due dates, you may submit reports according to the dates established by the permitting authority.



By when must I comply with the rule?

Upon startup



Photo credit: EPA



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You are subject to the SI NSPS (40 CFR 60 Subpart JJJJ) if your engine was:

–Constructed (**ordered***) after June 12, 2006 **AND:**

- Manufactured on/after July 1, 2007 (engines except lean burn <1,350 HP)
- Manufactured on/after January 1, 2008 if lean burn <1,350 HP

OR

–Modified/reconstructed after June 12, 2006.

*NOTE: For the purposes of this rule, the date that construction commences is the date the engine is ordered by the owner or operator.



Spark Ignition New Source Performance Standards (SI NSPS)

If you are subject to the SI NSPS, you must meet these requirements:

•**Emission and Operating Limits, Testing Requirements, Monitoring Requirements:**

- See Table
- Must meet these standards for the life of the engine

•**Fuel Requirements:**

- Gasoline engines must use gas that meets the sulfur limit: cap of 80 ppm/gal



Spark Ignition New Source Performance Standards (SI NSPS)

If you are subject to the SI NSPS, you must meet these requirements:

•Compliance Requirements:

If you have a *certified* engine:

- Install, configure, operate and maintain engine according to manufacturer's instructions
- If you do not operate/maintain according to manufacturer's instructions-
 - Keep maintenance plan and maintenance records, operate consistent with good air pollution control practices
 - Initial performance test and subsequent testing every 8,760 hours or 3 years, whichever is first

If you have a *non-certified* engine:

- Maintenance plan
- Initial test and subsequent testing every 8,760 hours or 3 years, whichever is first

•Recordkeeping/Reporting:

- Documentation of certification (EPA Certificate of Conformity)
- Records of maintenance
- Initial notification for non-certified engines
- Notification of Intent to Conduct Performance Testing 30 days prior to test
- Results of performance testing within 60 days of test



Engine Certification

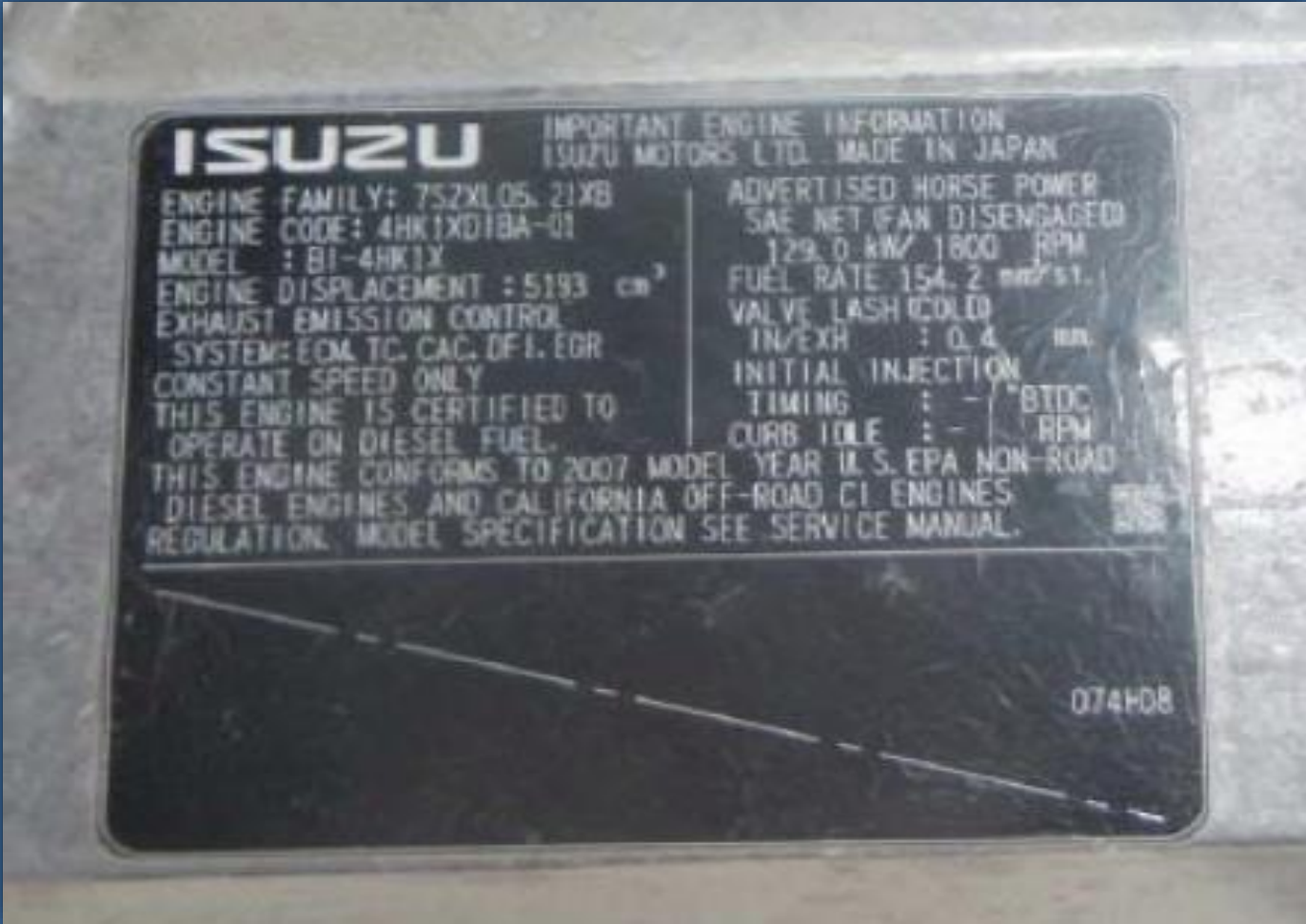


Photo credit: EPA



EPA Certificate of Conformity

	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 2012 MODEL YEAR CERTIFICATE OF CONFORMITY WITH THE CLEAN AIR ACT OF 1990	OFFICE OF TRANSPORTATION AND AIR QUALITY ANN ARBOR, MICHIGAN 48105	
Certificate Issued To: Generac Power Systems, Inc. (U.S. Manufacturer or Importer) Certificate Number: CGNXB06.82NN-012	Effective Date: 10/26/2011 Expiration Date: 12/31/2012	 Byron J. Burkner, Acting Division Director Compliance Division	Issue Date: 10/26/2011 Revision Date: N/A
Manufacturer: Generac Power Systems, Inc. Engine Family: CGNXB06.82NN Certificate Number: CGNXB06.82NN-012 Certification Type: Stationary (Part 60) Fuel: Natural Gas (CNG/LNG) Emission Standards: NMHC + NOx (g/kW-hr) : 13.4 CO (g/kW-hr) : 519 HC + NOx (g/kW-hr) : 13.4 Emergency Use Only: Y			
<p>Pursuant to Section 213 of the Clean Air Act (42 U.S.C. section 7547) and 40 CFR Part 60, 1065, 1068, and 60 (stationary only and combined stationary and mobile) and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following nonroad engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.</p> <p>This certificate of conformity covers only those new nonroad spark-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60. This certificate of conformity does not cover nonroad engines imported prior to the effective date of the certificate.</p> <p>It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068.20 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 Part 60. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void <i>ab initio</i> for other reasons specified in 40 CFR Part 60.</p> <p>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.</p>			

Photo credit: EPA

Table of Requirements

Engine Category	Date Constructed/ Reconstructed/ Manufactured	Emission Standards	Importing/ Installing Requirements ³	Compliance Requirements				Notification, Reports, and Records Requirements	General Provisions (40 CFR part 60)
				Engines being operated and maintained in a certified manner ¹		Engines being operated and maintained in a <u>non-certified</u> manner ²			
				General Compliance	Performance Testing	General Compliance	Performance Testing		
Lean burn HP<1,350	Commenced construction after 6/12/2006 and manufactured on or after 1/1/2008	60.4233(e)	60.4236(b)	60.4243(a)(1) If using AFRC: 60.4243(g) 40 CFR part 1068, subparts A-D.	None	60.4243(a)(2)(iii) If using AFRC: 60.4243(g)	60.4243(a)(2)(iii) 60.4244	<u>All Engines:</u> 60.4245(a),(d) <u>Non-certified:</u> 60.4245(c)	60.4246 Table 3
>500 HP	Commenced construction after 6/12/2006 and manufactured on or after 7/1/2007		You may not install ICE that do not meet the requirements in 60.4233.	If using AFRC: 60.4243(g) <u>Certified:</u> 60.4243(b)(1) 60.4243(a)(1) <u>Non-certified:</u> 60.4243(b)(2)	<u>Non-Certified:</u> 60.4243(b)(2)(ii) 60.4244 <u>Certified:</u> None				
Modified/ Reconstructed >500 HP	Modified or reconstructed after 6/12/2006	60.4233(f)(5)	None	If using AFRC: 60.4243(g) 60.4243(i)		60.4245(a),(d)			

¹If you operate/maintain the certified engine and control device according to the manufacturer's emission-related instructions, you are operating in a certified manner.

²If you do not operate and maintain the certified engine and control device according to manufacturer's emission-related instructions, engine will be considered non-certified.

³The requirements of this section do not apply to ICE that have been modified or reconstructed, and they do not apply to engines that were removed from one existing location and reinstalled at a new location.



Where do I send notifications and reports?



EPA REGION 1:

US Environmental Protection Agency

5 Post Office Square, Suite 100, Mail code: OES04-2

Boston, MA 02109-3912

Attention: Air Clerk

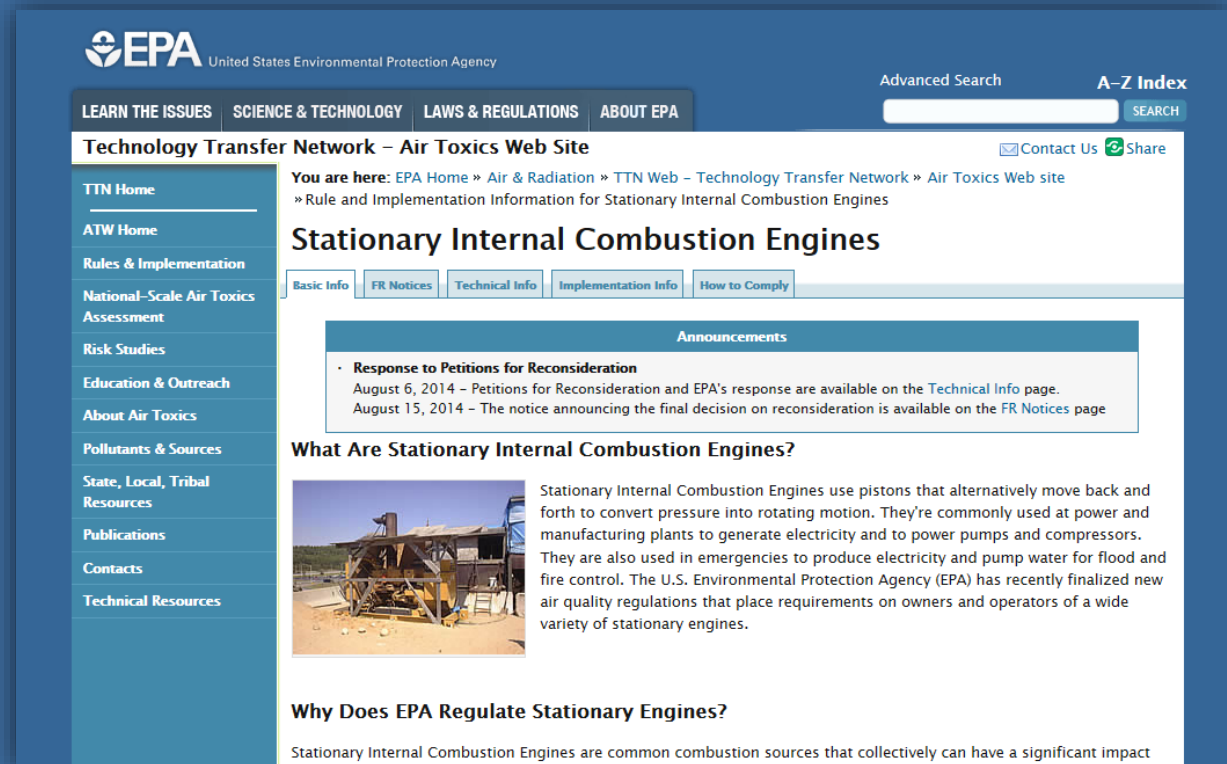


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Visit the EPA RICE Compliance Page

www.epa.gov/ttn/atw/icengines

- ▶ Fact sheets
- ▶ Regulations
- ▶ Example notifications
- ▶ Announcements
- ▶ Q & A documents
- ▶ Testing advice
- ▶ Recorded webinars
- ▶ ...and more!



The screenshot shows the EPA website's Technology Transfer Network (TTN) page for Air Toxics Web Site. The page is titled "Stationary Internal Combustion Engines" and includes a navigation menu with options like "Basic Info", "FR Notices", "Technical Info", "Implementation Info", and "How to Comply". A section titled "Announcements" features a "Response to Petitions for Reconsideration" dated August 6, 2014, and August 15, 2014. Below this, there is a section titled "What Are Stationary Internal Combustion Engines?" with a photograph of a large industrial engine and a brief description. The text explains that these engines use pistons to convert pressure into rotating motion and are commonly used in power and manufacturing plants. It also mentions that the EPA has recently finalized new air quality regulations for these engines. A section titled "Why Does EPA Regulate Stationary Engines?" is partially visible at the bottom.



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Take Aways

Engine Type:

- A new or reconstructed landfill/digester gas engine at a major source having a site rating greater than 500 horsepower

Monitoring/Recordkeeping:

- Monitor and record fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel

Reporting:

•Initial Notification

- 120 days after effective date or construction/reconstruction

•Annual Report

- Fuel flow rate of each fuel and the heating values that were used in calculations, and a demonstration that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10% or more of the gross heat input on an annual basis
- Operating limits provided in your permit, and any deviations
- Problems or errors suspected with the meters
- Due January 31st of each year, unless permitting authority has specified otherwise



Take Aways

NSPS:

- Comply with SI NSPS, if applicable

Compliance Date:

- Upon startup

