



# 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**  
**Area Source New Spark Ignition 4-Stroke Rich Burn Engine**  
**≤500 Horsepower**



Connecticut Department of Energy and Environmental Protection

# Compliance Requirements

You must comply with the Spark Ignition (SI) New Source Performance Standards (NSPS), as applicable, upon startup.



Photo credit: EPA



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# Spark Ignition New Source Performance Standards (SI NSPS)

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

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

- 500 HP manufactured on/after July 1, 2007

- <500 HP manufactured on/after July 1, 2008

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)



Photo credit: EPA

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 fuel that meets the sulfur limit: cap of 80 ppm/gal



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# 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, operate, and maintain engine according to manufacturer's instructions
- If you do not operate/maintain according to manufacturer's instructions for engines  $\geq 100$  HP:
  - Keep maintenance plan and maintenance records, operate consistent with good air pollution control practices
  - Initial performance test and retest if engine is rebuilt or undergoes major repair or maintenance
- If you have a *non-certified* engine  $>25$  HP:
  - Maintenance plan
  - Initial performance test and retest if engine is rebuilt or undergoes major repair or maintenance

## •Recordkeeping/Reporting:

- Documentation of certification (EPA Certificate of Conformity)
- Records of engine maintenance
- Initial notification for non-certified engines with HP=500
- Notification of Intent to Conduct Performance Testing 30 days prior to test
- Results of performance testing within 60 days of test



# Engine Certification

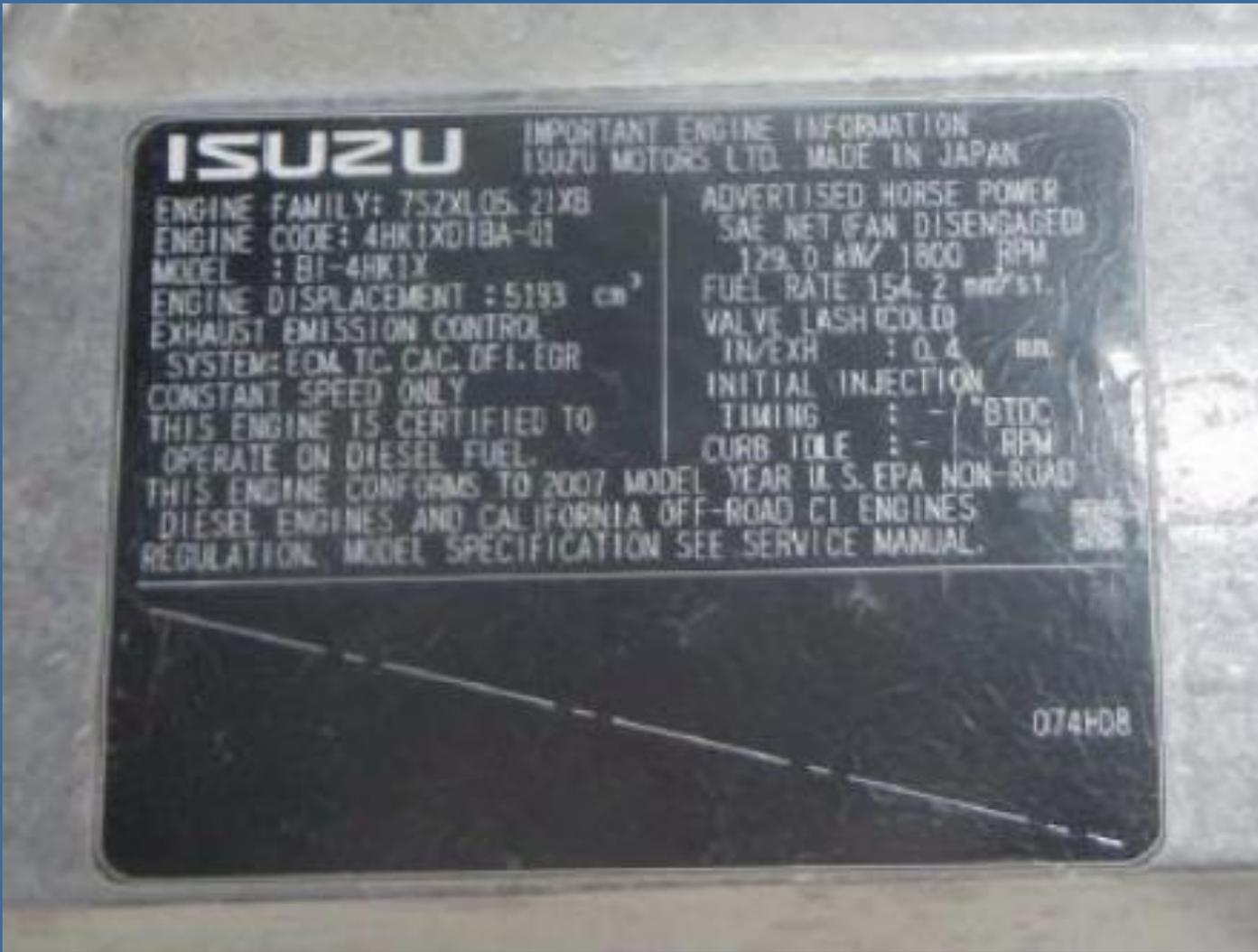


Photo credit: EPA



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# EPA Certificate of Conformity

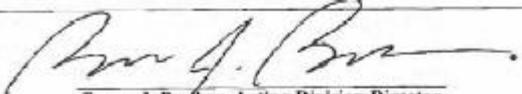
	<b>UNITED STATES ENVIRONMENTAL PROTECTION AGENCY</b> <b>2012 MODEL YEAR</b> <b>CERTIFICATE OF CONFORMITY</b> <b>WITH THE CLEAN AIR ACT OF 1990</b>	<b>OFFICE OF TRANSPORTATION AND AIR QUALITY</b> <b>ANN ARBOR, MICHIGAN 48105</b>	
<b>Certificate Issued To:</b> Generac Power Systems, Inc. (U.S. Manufacturer or Importer)  <b>Certificate Number:</b> CGNXB06.82NN-012	<b>Effective Date:</b> 10/26/2011  <b>Expiration Date:</b> 12/31/2012	 Byron J. Burker, Acting Division Director Compliance Division	<b>Issue Date:</b> 10/26/2011  <b>Revision Date:</b> N/A
<b>Manufacturer:</b> Generac Power Systems, Inc. <b>Engine Family:</b> CGNXB06.82NN <b>Certificate Number:</b> CGNXB06.82NN-012 <b>Certification Type:</b> Stationary (Part 60) <b>Fuel:</b> Natural Gas (CNG/LNG) <b>Emission Standards:</b> NMHC + NOx (g/kW-hr) : 13.4 CO (g/kW-hr) : 519 HC + NOx (g/kW-hr) : 13.4 <b>Emergency Use Only:</b> 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

Engine Category	Date Constructed/Reconstructed/Manufactured	Size/Engine Type/Fuel	Emission Standards	Importing/Installing Requirements <sup>5</sup>	Compliance Requirements				Notification, Reports, and Records Reqs	General Reqs (40 CFR part 60)
					Engines being operated and maintained in a certified manner <sup>1</sup>		Engines being operated and maintained in a <u>non-certified</u> manner <sup>2</sup>			
					General Compliance	Performance Testing	General Compliance	Performance Testing		
<500 HP	Commenced construction after 6/12/2006 and manufactured on or after 7/1/2008	≤25 HP	60.4231(a) 60.4233(a)	60.4236(a),(d)	60.4243(a)(1) If using AFRC: 60.4243(g) 40 CFR part 1068, subparts A-D.	None	60.4243(a)(2)(i) If using AFRC: 60.4243(g)	None	60.4245(a)	
		25<HP<500 Gasoline	60.4231(b) 60.4233(b)				If using AFRC: 60.4243(g) <u>≤100 HP:</u> 60.4243(a)(2)(i) <u>100&lt;HP:</u> 60.4243(a)(2)(ii)	<u>≤100 HP:</u> None <u>100&lt;HP:</u> 60.4243(a)(2)(ii) <sup>4</sup> 60.4244		
		25<HP<500 Rich Burn LPG	60.4231(c) 60.4233(c)							
		25<HP<100 (except gasoline and rich burn LPG)	60.4233(d) <sup>3</sup>	60.4236(a)	If using AFRC: 60.4243(g) <u>Certified:</u> 60.4243(b)(1) <u>Non-certified:</u> 60.4243(b)(2)	<u>Certified:</u> None <u>Non-Certified:</u> 60.4243(b)(2)(i) <sup>4</sup> , 60.4244	60.4243(a)(2)(i) If using AFRC: 60.4243(g)	<u>All Engines:</u> 60.4244 <u>Certified:</u> ≥100 HP: 60.4243(a)(2)(ii) <u>Non-Certified:</u> 60.4243(b)(2)(i) <sup>4</sup>	60.4245(a),(d)	
		100≤HP<500 (except gasoline and rich burn LPG)	60.4233(e) <sup>4</sup> Table 1				60.4243(a)(2)(ii) If using AFRC: 60.4243(g)	<u>All Engines:</u> 60.4244 <u>Certified:</u> 60.4243(a)(2)(ii) <u>Non-Certified:</u> 60.4243(b)(2)(i) <sup>4</sup>		
500 HP	Commenced construction after 6/12/2006 and manufactured on or after 7/1/2007	≥500 HP Gasoline	60.4231(b) 60.4233(b)	60.4236(b),(d)	If using AFRC: 60.4243(g) <u>Manufactured before 7/1/2008:</u> 60.4243(h) <u>Manufactured after 7/1/2008:</u> 60.4243(a)(1) 40 CFR part 1068, subparts A-D, as applicable.	None	If using AFRC: 60.4243(g) <u>Manufactured before 7/1/2008:</u> 60.4243(h) <u>Manufactured after 7/1/2008:</u> 60.4243(a)(2)(iii)	<u>Manufactured before 7/1/2008:</u> None <u>Manufactured after 7/1/2008:</u> 60.4243(a)(2)(iii) <sup>4</sup> 60.4244	60.4246 Table 3	
		500 HP Rich Burn LPG	60.4231(c) 60.4233(c)				If using AFRC: 60.4243(g) <u>Manufactured before 7/1/2008:</u> 60.4243(h)	<u>Manufactured before 7/1/2008:</u> None <u>Manufactured after 7/1/2008:</u> 60.4243(a)(2)(iii) <sup>5</sup> 60.4244		<u>All Engines:</u> 60.4245(a),(d) <u>Non-certified:</u> 60.4245(c)
		500 HP (except gasoline and rich burn LPG)	60.4233(e)	60.4236(b)	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	60.4243(a)(2)(iii) If using AFRC: 60.4243(g)	60.4243(a)(2)(iii) 60.4244		
Modified/Reconstructed	Modified or reconstructed after 6/12/2006	≤25 HP	60.4233(f)(1)	None	If using AFRC: 60.4243(g) 60.4243(i)				60.4245(a)	
		>25 HP Gasoline	60.4233(f)(2)						60.4245(a),(d)	
		>25 HP Rich Burn LPG	60.4233(f)(3)							
		>25 HP natural gas and lean burn LPG	60.4233(f)(4)							

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

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

<sup>3</sup>Owners and operators of ICE with a maximum power >19 KW (25 HP) and <75 KW (100 HP) manufactured prior to January 1, 2011, that were certified to the standards in Table 1 to the rule applicable to engines with a maximum power ≥100 HP and <500 HP, may optionally choose to meet those standards.

<sup>4</sup>If you own/operate an engine ≤500 HP and you purchase a non-certified engine or you do not operate and maintain your certified engine and control device according to the manufacturer's emission-related instructions, you are required to perform initial performance testing as indicated in this section, but you are not required to conduct subsequent performance testing unless the engine is rebuilt or undergoes major repair or maintenance. A rebuilt ICE means an engine that has been rebuilt as that term is defined in 40 CFR 94.11(a).

<sup>5</sup>The 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

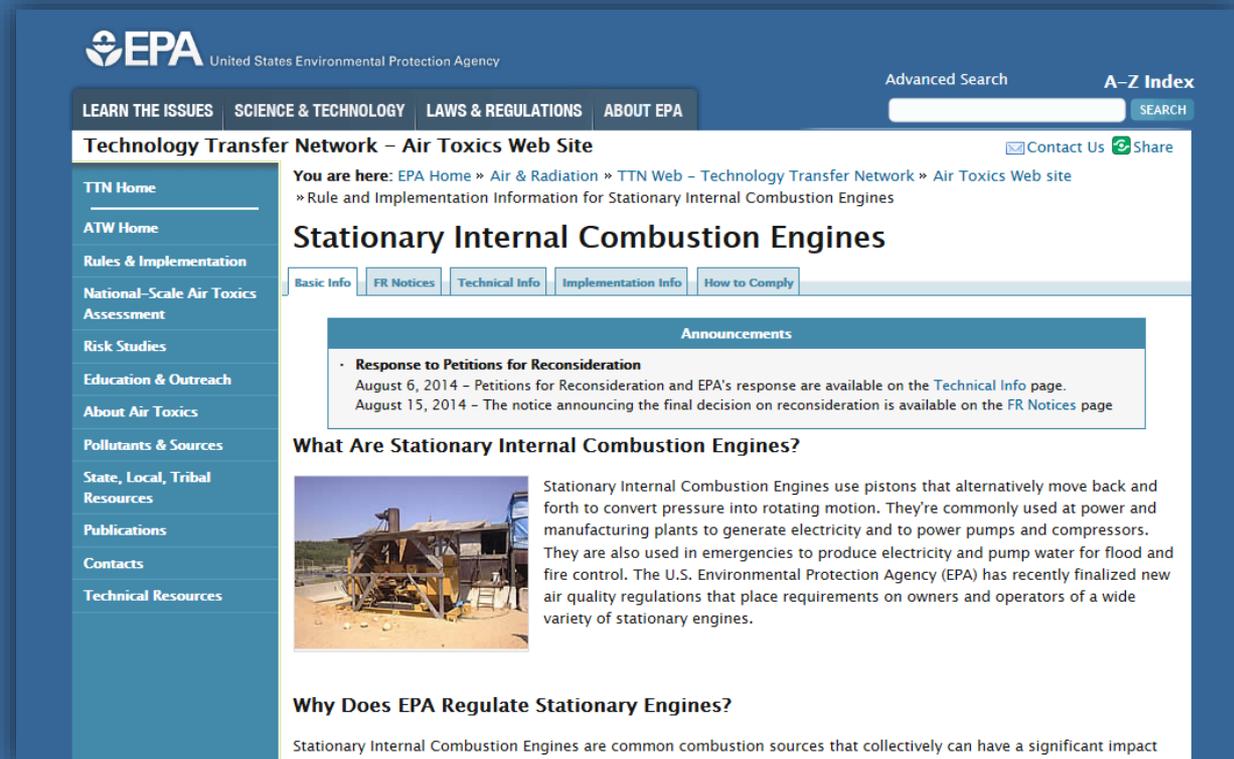


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# Visit the EPA RICE Compliance Page

[www.epa.gov/ttn/atw/icengines](http://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 navigation and content for Stationary Internal Combustion Engines. The top navigation bar includes 'LEARN THE ISSUES', 'SCIENCE & TECHNOLOGY', 'LAWS & REGULATIONS', and 'ABOUT EPA'. The main content area is titled 'Technology Transfer Network – Air Toxics Web Site' and features a sidebar with links to 'TTN Home', 'ATW Home', 'Rules & Implementation', 'National-Scale Air Toxics Assessment', 'Risk Studies', 'Education & Outreach', 'About Air Toxics', 'Pollutants & Sources', 'State, Local, Tribal Resources', 'Publications', 'Contacts', and 'Technical Resources'. The main content area is titled 'Stationary Internal Combustion Engines' and includes a 'Response to Petitions for Reconsideration' announcement, a section titled 'What Are Stationary Internal Combustion Engines?' with an image of a large industrial engine, and a section titled 'Why Does EPA Regulate Stationary Engines?'.



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# Take Aways

## Engine Type:

- A new or reconstructed non-emergency spark ignition 4-stroke rich burn engine at an area source with a site rating of less than or equal to 500 horsepower

## Compliance Date:

- Upon startup

## Compliance Requirements:

- Comply with all SI NSPS requirements, if applicable

