



# 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 Non-Emergency Compression Ignition Engine  
≤500 Horsepower**



Connecticut Department of Energy and Environmental Protection

# Compliance Requirements

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



Photo credit: EPA



Connecticut Department of Energy and Environmental Protection

## You are subject to the CI NSPS (40 CFR 60 Subpart IIII) if your CI engine was:

–Constructed (**ordered\***) after July 11, 2005 **AND** manufactured after April 1, 2006 (July 1, 2006 for fire pump engines)

OR

–Modified/reconstructed after July 11, 2005



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



# Compression Ignition New Source Performance Standards (CI NSPS)

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

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

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



Photo credit: EPA



Connecticut Department of Energy and Environmental Protection

# Compression Ignition New Source Performance Standards (CI NSPS)

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

## Fuel Requirements:

- As of October 1, 2007 – 500 ppm sulfur diesel (LSD)
- As of October 1, 2010 – 15 ppm sulfur diesel (ULSD) for engines <30 l/cyl displacement
  - You may use up any diesel fuel acquired prior to October 1, 2010 that does not meet the requirements for nonroad diesel fuel.
- As of June 1, 2012 – 1,000 ppm sulfur diesel for engines  $\geq$ 30 l/cyl displacement

NOTE: Per 40 CFR 60.4215(b), CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are not required to meet the fuel requirements. CI ICE that have a national security exemption under 40 CFR 60.4200(d) are also exempt from the fuel requirements listed here. Special requirements apply to engines used in Alaska. (See 40 CFR 60.4207(d) and 60.4216)

Per 40 CFR 60.4217, owners and operators of CI ICE that do not use diesel fuel may petition EPA for approval of alternative emission standards, if they can demonstrate that they use a fuel that is not the fuel on which the manufacturer of the engine certified the engine and that the engine cannot meet the applicable standards required in 40 CFR 60.4204 or 60.4205 using such fuels and that use of such fuel is appropriate and reasonably necessary, considering cost, energy, technical feasibility, human health and environmental, and other factors, for the operation of the engine.



# Compression Ignition New Source Performance Standards (CI NSPS)

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

## Compliance Requirements:

•If you have 2007 model year or later engine with displacement <30 l/cyl, or a fire pump engine that is 2008-2011 model year or later, depending on engine size, you must:

- Purchase certified engine
- Install, operate, and maintain engine per manufacturer's instructions/procedures
  - Performance testing not required
  - Can operate differently than manufacturer's recommendations, but must then do performance test to show compliance

•Engines not required to be certified (choose one of the following to comply):

- Purchase certified engine
- Keep records of performance test conducted on similar engine
- Keep records of engine manufacturer data indicating compliance
- Keep records of control device vendor data indicating compliance
- Conduct initial performance test

•Engines  $\geq 30$  l/cyl displacement:

- Initial performance test
- Annual performance test
- Continuously monitor operating parameters



# Certified Engine


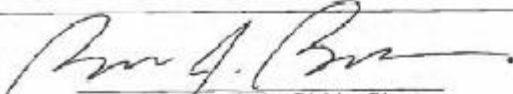


Photo credit: EPA





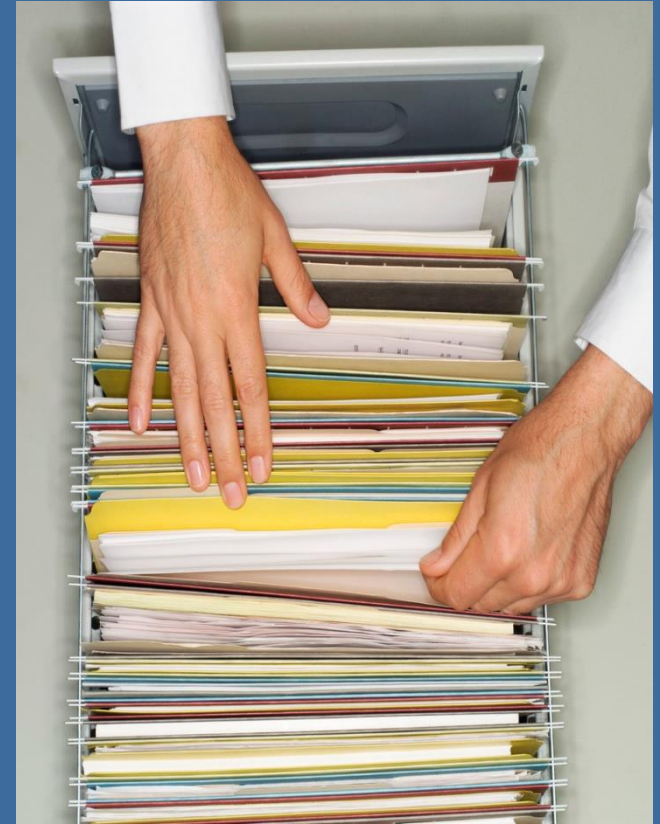
# EPA Certificate of Conformity

	<p align="center"><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></p>	<p align="center"><b>OFFICE OF TRANSPORTATION  AND AIR QUALITY</b>  <b>ANN ARBOR, MICHIGAN 48105</b></p>	
<p><b>Certificate Issued To:</b> Generac Power Systems, Inc.  (U.S. Manufacturer or Importer)  <b>Certificate Number:</b> CGNXB06.82NN-012</p>	<p><b>Effective Date:</b>  10/26/2011  <b>Expiration Date:</b>  12/31/2012</p>	 Byron J. Burker, Acting Division Director Compliance Division	<p><b>Issue Date:</b>  10/26/2011  <b>Revision Date:</b>  N/A</p>
<p><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>			
<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>			

# Compression Ignition New Source Performance Standards (CI NSPS)

## Recordkeeping/Reporting:

- Engine equipped with diesel particulate filter (DPF)
  - Must install a backpressure monitor that notifies when the high backpressure limit of the engine is approached. Keep records of corrective actions taken after the monitor has notified that the limit is approached.
- If displacement  $>10$  l/cyl or if engine is pre-2007 model year  $>175$  HP and not certified:
  - Submit initial notification
  - Keep records of notifications and maintenance
  - If certified, keep records of documentation of engine certification
  - If not certified, keep records of compliance demonstrations



Non-emergency CI Engine Category	Date Constructed/Reconstructed/Manufactured	Emission Standards <sup>b,c,d</sup>	Importing/Installing Requirements	Compliance Requirements	Testing Requirements	Notification, Reports, and Records Requirements	General Provisions (40 CFR part 60)
Pre-2007 model year <10 l/cyl	Commenced construction after 7/11/2005 and manufactured after 4/1/2006	60.4204(a) Table 1	60.4208(a)-(f), (i)	60.4211(a), (b), (g)	60.4212 60.4204(d)	If >175 HP <u>and</u> not certified: 60.4214(a)	Table 8
Pre-2007 model year 10 l/cyl ≤ displacement < 30 l/cyl		60.4204(a) 40 CFR 94.8(a)(1)	60.4208(a)-(i)			60.4214(a)	
2007 model year and later <30 l/cyl		60.4204(b) 60.4201		60.4211(a), (c), (g)		If >10 l/cyl: 60.4214(a)	
≥30 l/cyl		60.4204(c)(1)-(4)	60.4208(a)-(f), (h), (i)	60.4211(a), (d), (g)		60.4213	
Modified/Reconstructed <30 l/cyl	Modified or reconstructed after 7/11/2005	<u>Pre-2007 Model Year</u> : 60.4204(a) <u>2007 Model Year and Later</u> : 60.4204(b)	60.4208(i)	60.4211(a), (e), (g)	60.4212 60.4204(d)	If >10 l/cyl <u>or</u> pre-2007 model year and >175 HP <u>and</u> not certified: 60.4214(a)	
Modified/Reconstructed ≥30 l/cyl		60.4204(c)(1)-(4)				60.4213	60.4214(a)

<sup>a</sup>Per 60.4200(e), facilities with ICE that are acting as temporary replacement units and that are located at a stationary source for <1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this rule with regard to such engines' requirements in 40 CFR 60.4207.

<sup>b</sup>Per 60.4215(a), ICE with a displacement of <30 l/cyl that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the applicable emission standards in §60.4202 and §60.4205.

<sup>c</sup>ICE with a displacement of ≥30 l/cyl that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the emission standards in 60.4215(c).

<sup>d</sup>Special requirements apply to engines used in Alaska. Please refer to 60.4216 for the specific requirements and provisions that apply.



# 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

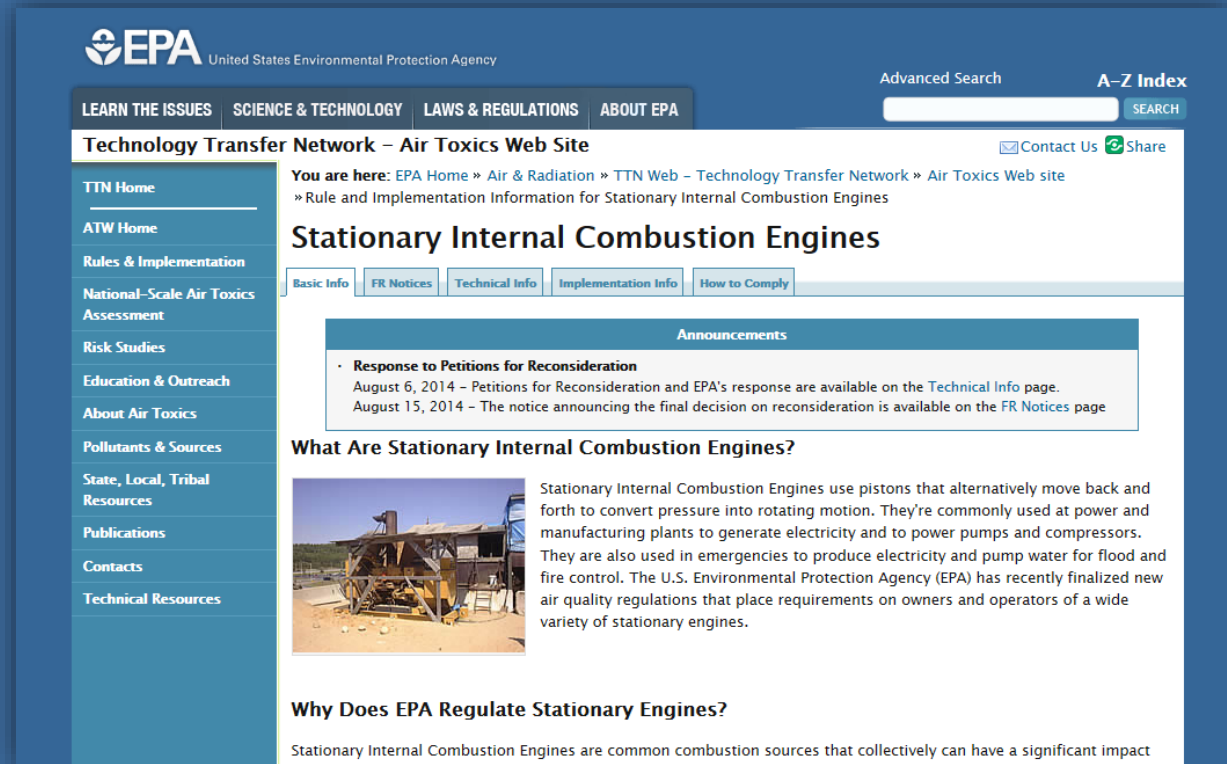


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# Visit the EPA RICE Compliance Page

[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 Technology Transfer Network (TTN) 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. Another 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 non-emergency compression ignition engine at a major source having a site rating of less than or equal to 500 horsepower

## Compliance Requirements:

- You must comply with all requirements of the CI NSPS (40 CFR 60 Subpart III), as applicable

## Compliance Date:

- Upon startup

