



Connecticut Department of Energy and Environmental Protection



Connecticut Department of
**ENERGY &
ENVIRONMENTAL
PROTECTION**

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



40 CFR 63 Subpart ZZZZ

**Area Source New Non-Emergency Spark Ignition 2-Stroke Lean Burn
Engine ≤ 500 Horsepower**



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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 SI engine was:

- Constructed (**ordered***) after June 12, 2006 **AND**
 - 500 HP manufactured on/after January 1, 2008
 - <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.



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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



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 ≥ 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

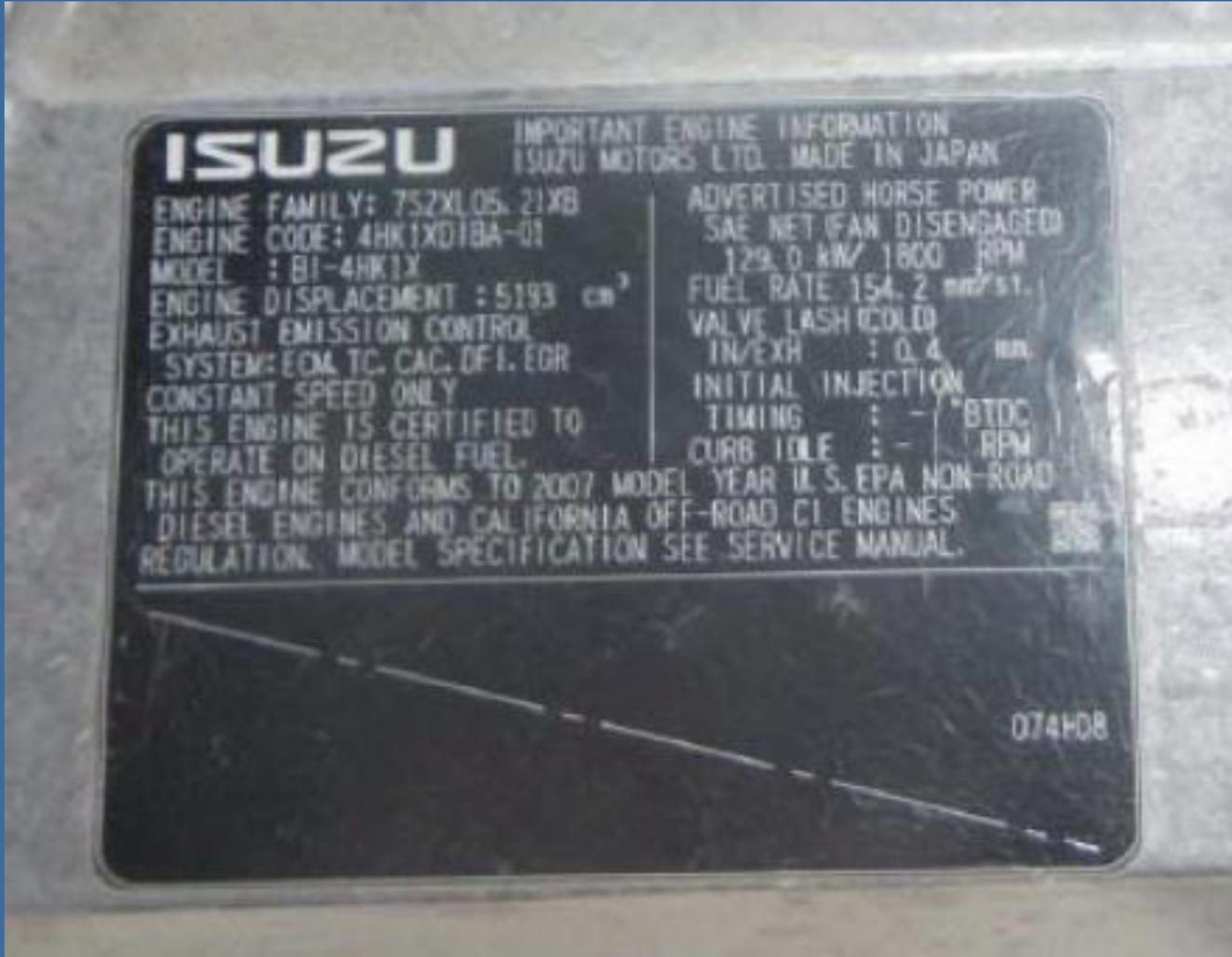


Photo credit: EPA



| NE SI 2SLB Engine Category | Date Constructed/ Reconstructed / Manufactured | Size/Engine Type/Fuel | Emission Standards | Importing/ Installing Requirements ⁶ | Compliance Requirements | | | | Notification, Reports, and Records Requirements | General Provisions (40 CFR part 60) |
|-------------------------------------|--|--|------------------------------------|---|---|---|--|--|--|--|
| | | | | | Engines being operated and maintained in a certified manner ² | | Engines being operated and maintained in a <u>non-</u> <u>certified</u> manner ³ | | | |
| | | | | | 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) | 60.4246 Table 3 |
| | | 25<HP<500 Gasoline | 60.4231(b) 60.4233(b) | | | | 60.4243(a)(2)(i) If using AFRC: 60.4243(g) ≤100 HP: 60.4243(a)(2)(i) 100≤HP: 60.4243(a)(2)(ii) | All Engines: 60.4244 <100 HP: None required 100<HP: 60.4243(a)(2)(ii) ⁵ | | |
| | | 25<HP<100 (except gasoline) | 60.4233(d) ⁴ | 60.4236(a) | If using AFRC: 60.4243(g) Certified 60.4243(b)(1) Non-Certified: 60.4243(b)(2) | Certified: No Requirements Non-Certified: 60.4243(b)(2)(i) ⁵ , 60.4244 | 60.4243(a)(2)(i) If using AFRC: 60.4243(g) | All Engines: 60.4244 Certified: ≥100 HP: 60.4243(a)(2)(ii) Non-Certified: 60.4243(b)(2)(i) ⁵ | 60.4245(a),(d) | |
| | | 100≤HP<500 (except gasoline) | 60.4233(e) ⁵ Table 1 | | | | 60.4243(a)(2)(ii) If using AFRC: 60.4243(g) | All Engines: 60.4244 Certified: 60.4243(a)(2)(ii) Non-Certified: 60.4243(b)(2)(i) ⁵ | | |
| 500 HP | Commenced construction after 6/12/2006 and manufactured on or after 1/1/2008 | 500 HP | 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) ⁵ 60.4244 | All Engines: 60.4245(a),(d) Non-certified: 60.4245(c) | |
| 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 natural gas and lean burn LPG | 60.4233(f)(4) | | | | | | | |

¹Facilities with engines 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.

²If 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.

³If you do not operate and maintain the certified engine and control device according to manufacturer's emission-related instructions, your engine will be considered a non-certified engine.

⁴ICE with a maximum engine 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 this rule applicable to engines with a maximum engine power ≥100 HP and <500 HP, may optionally choose to meet those standards.

⁵If 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).

⁶The 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

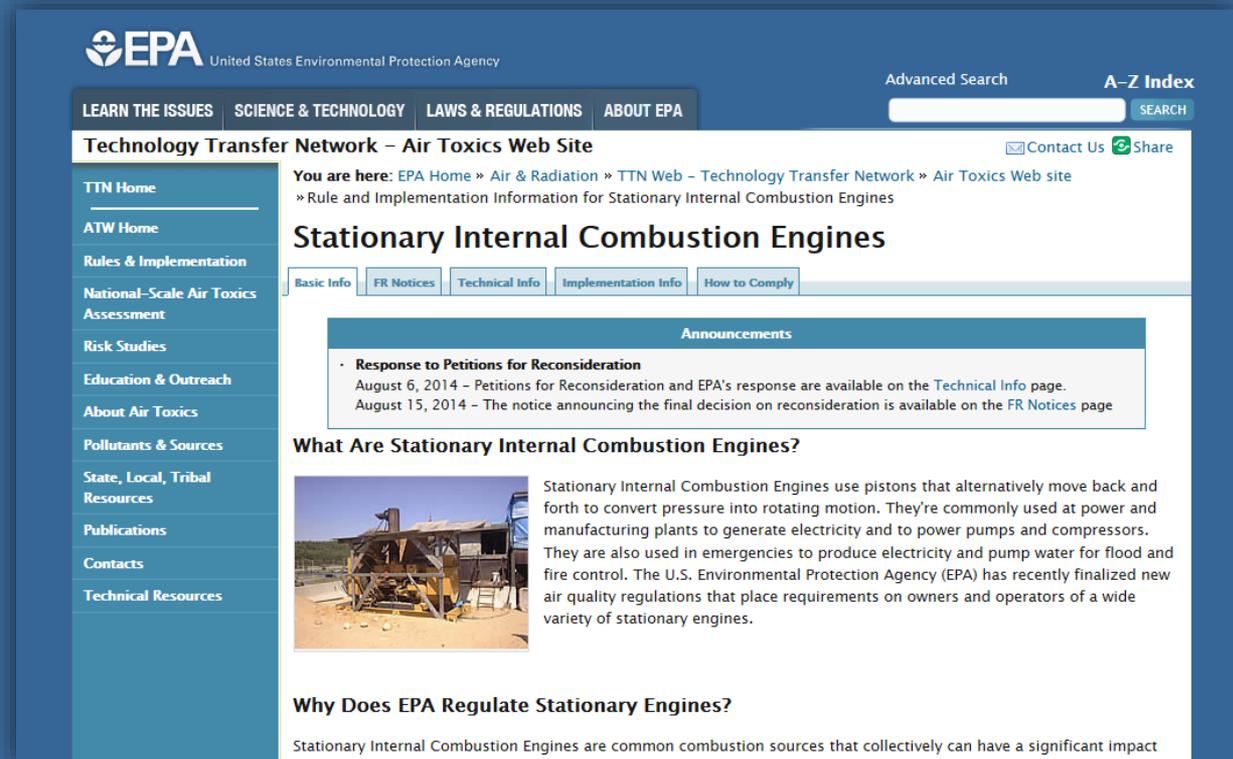


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Visit the EPA RICE Compliance Page

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 is part of the "Rule and Implementation Information for Stationary Internal Combustion Engines". The page features a navigation menu on the left 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 includes an "Announcements" section with a link to "Response to Petitions for Reconsideration" and a section titled "What Are Stationary Internal Combustion Engines?" which includes a photograph of a stationary internal combustion engine and a brief description of its function. Below this is a section titled "Why Does EPA Regulate Stationary Engines?" with a brief explanation of their impact.



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Take Aways

Engine Type:

- A new or reconstructed non-emergency spark ignition 2-stroke lean 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

