



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 Existing Non-Emergency Spark Ignition 4-Stroke Rich
Burn Engine >500 Horsepower (≤ 24 hours/year)**



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To comply with this rule, you must meet the following equipment standards:

Every **500** hours of operation or annually, whichever comes first, you must:

- Change oil and filter

- Can utilize oil analysis program to extend specified oil change requirement

- Analysis must be performed every 500 hours of operation or annually, whichever comes first.

- Analysis must at a minimum analyze: Total Acid Number, viscosity, and percent water content.

- Condemning limits for these parameters are: Total Acid Number increases by >3.0 mg KOH/g from Total Acid Number of the oil when new; viscosity of the oil has changed by $>20\%$ from the viscosity of the oil when new; or percent water content (by volume) is >0.5 .

- If all condemning limits are not exceeded you are not required to change the oil.

- If any limits are exceeded, change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results are received, change the oil within 2 days or before commencing operation, whichever is later.

- Keep records of parameters analyzed, results of the analysis, and oil changes.

- Analysis program must be part of the engine maintenance plan.



To comply with this rule, you must meet the following equipment standards:

Every **500** hours of operation or annually, whichever comes first, you must:

- Inspect all hoses and belts and replace as necessary

Every **1,000** hours of operation or annually, whichever comes first, you must:

- Inspect spark plugs and replace as necessary

At all times you must operate/maintain all equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions.



You must show continuous compliance by...

- Operating and maintaining the engine according to the manufacturer's emission-related operation and maintenance instructions; or
- Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions



Monitoring Requirements



Photo credit: EPA

Minimize the engine's time spent at idle during startup and minimize startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.



To demonstrate compliance with all rule requirements, you must keep records of:

- Maintenance conducted on the engine to demonstrate that you operated and maintained the engine and after-treatment control device (if any) according to your own maintenance plan.
- Keep records for 5 years from the date of creation.



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By when must I comply with the rule?

October 19, 2013



Photo credit: EPA

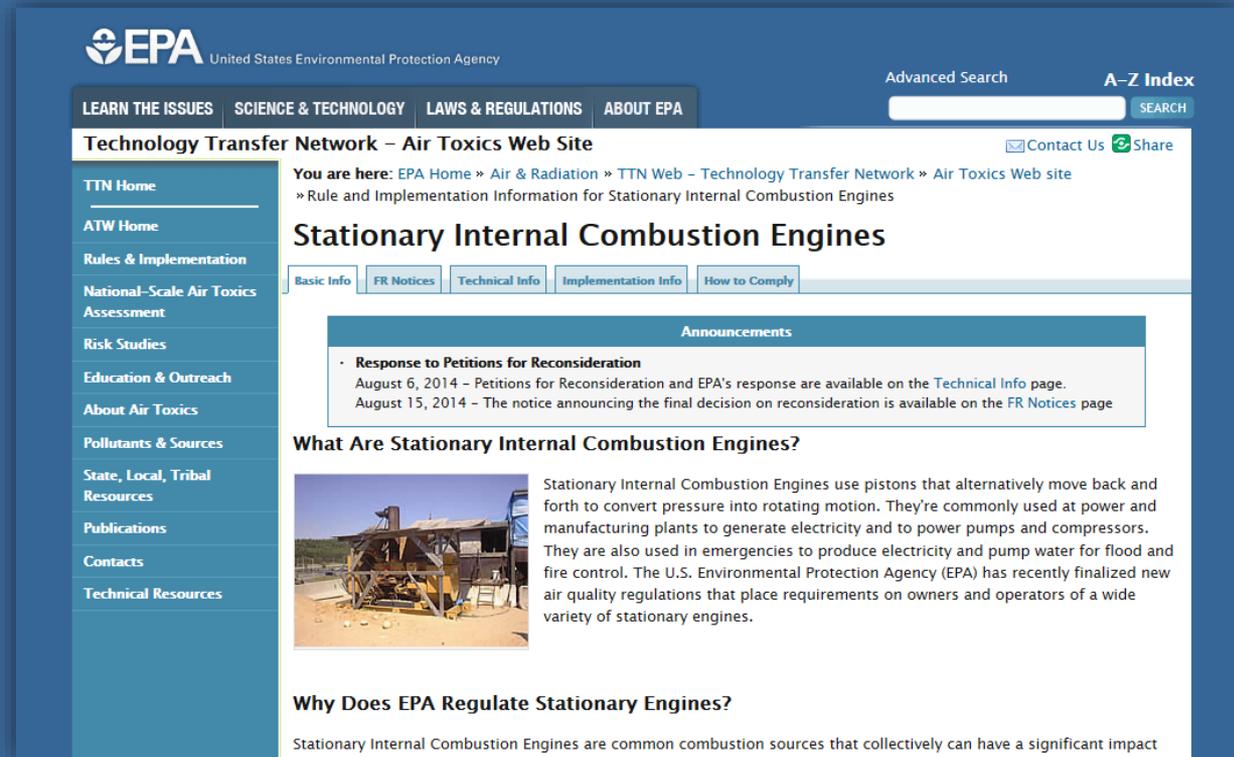


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Visit the EPA RICE Compliance Page

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 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 like 'TTN Home', 'ATW Home', and 'Rules & Implementation'. The main content area includes a breadcrumb trail, a search bar, and a section for 'Stationary Internal Combustion Engines' with sub-tabs for 'Basic Info', 'FR Notices', 'Technical Info', 'Implementation Info', and 'How to Comply'. An 'Announcements' section highlights a 'Response to Petitions for Reconsideration' from August 2014. Below this, there is a section titled 'What Are Stationary Internal Combustion Engines?' with an image of a large industrial engine and a text description. A final section, 'Why Does EPA Regulate Stationary Engines?', explains their common use and the impact of regulations.



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Take Aways

Engine Type:

- An existing non-emergency spark ignition 4-stroke rich burn engine at an area source with a site rating of greater than 500 HP which is operated 24 hours or less per calendar year

Standards:

- Change oil/filter (can use oil analysis program) and inspect hoses and belts every 500 hours or annually and replace as needed
- Inspect spark plugs and replace as necessary every 1,000 hours or annually

Monitoring:

- Operate/maintain engine according to manufacturer's instructions or develop maintenance plan



Take Aways

Recordkeeping:

- Keep records of engine maintenance
- Retain records for 5 years

Testing and Reporting:

- None required

Compliance Date:

- October 19, 2013

