



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
**Major Source Existing Non-Emergency Spark Ignition 2-Stroke Lean
Burn Engine <100 Horsepower**



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

Every 4,320 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 4,320 hours or annually, whichever comes first.
 - Program 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; 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, the results, and the oil changes.
 - Analysis program must be part of the engine maintenance plan.



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

Every 4,320 hours of operation or annually, whichever comes first, you must:

- Inspect spark plugs, hoses, and belts, and replace as necessary.
 - You can petition EPA pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

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...

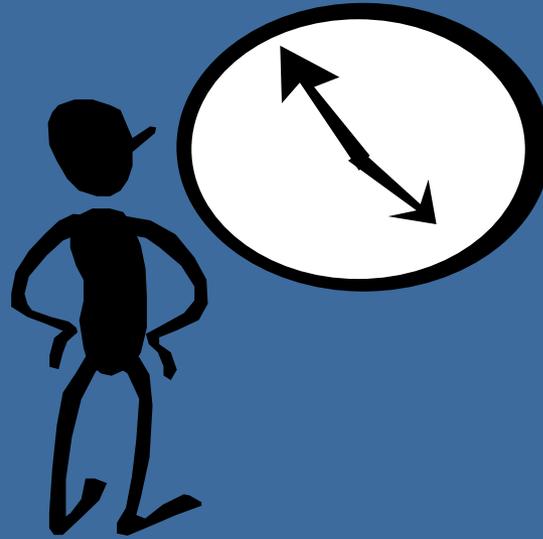


Photo credit: EPA

- 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



Minimize the engine's time spent at idle during startup and minimize the engine's 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 in order 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

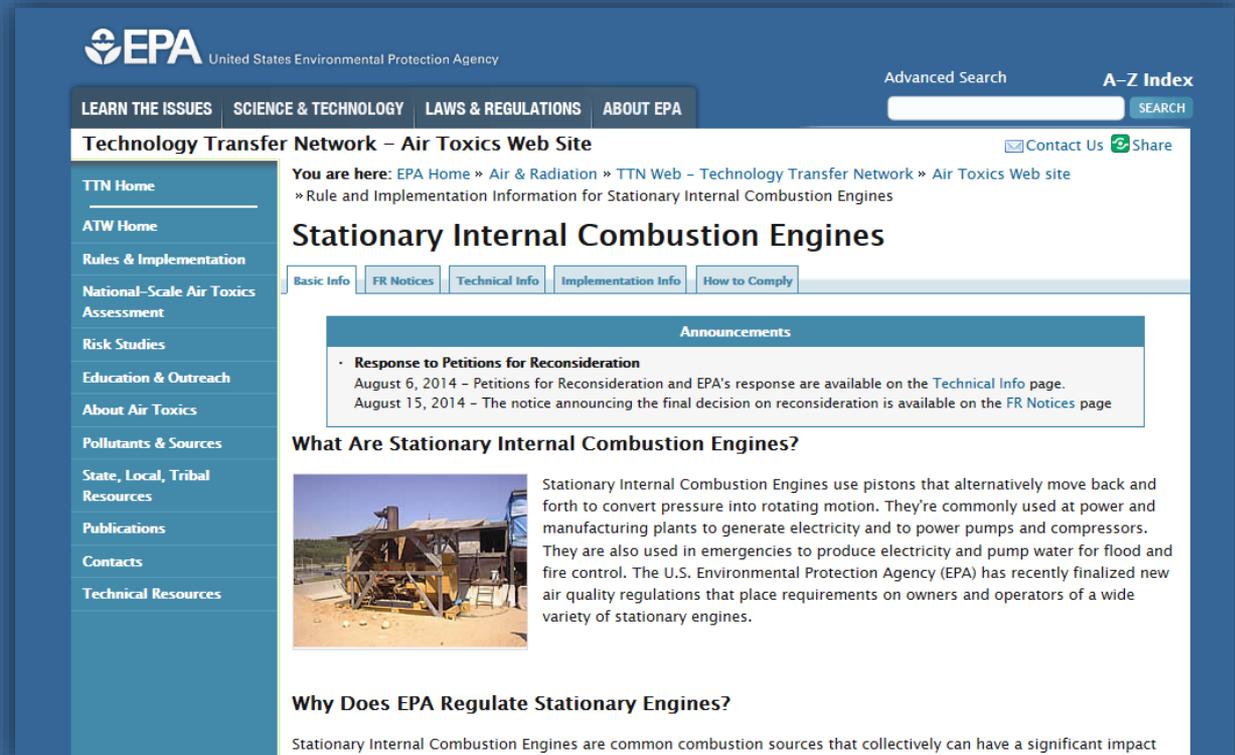


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Visit the EPA RICE Compliance Page

www.epa.gov/ttn/atw/icengines

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



The screenshot displays the EPA website's navigation and content for Stationary Internal Combustion Engines. At the top, the EPA logo and navigation tabs (LEARN THE ISSUES, SCIENCE & TECHNOLOGY, LAWS & REGULATIONS, ABOUT EPA) are visible. The page title is "Technology Transfer Network – Air Toxics Web Site". A breadcrumb trail shows the path: EPA Home » Air & Radiation » TTN Web – Technology Transfer Network » Air Toxics Web site » Rule and Implementation Information for Stationary Internal Combustion Engines. The main heading is "Stationary Internal Combustion Engines". Below this, there are tabs for "Basic Info", "FR Notices", "Technical Info", "Implementation Info", and "How to Comply". An "Announcements" section highlights a "Response to Petitions for Reconsideration" dated August 6, 2014, and August 15, 2014. A section titled "What Are Stationary Internal Combustion Engines?" includes a photograph of a large industrial engine and a text description: "Stationary Internal Combustion Engines use pistons that alternatively move back and forth to convert pressure into rotating motion. They're commonly used at power and manufacturing plants to generate electricity and to power pumps and compressors. They are also used in emergencies to produce electricity and pump water for flood and fire control. The U.S. Environmental Protection Agency (EPA) has recently finalized new air quality regulations that place requirements on owners and operators of a wide variety of stationary engines." Below this, a section titled "Why Does EPA Regulate Stationary Engines?" states: "Stationary Internal Combustion Engines are common combustion sources that collectively can have a significant impact".



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Take Aways

Engine Type:

- An existing non-emergency spark ignition 2-stroke lean burn engine at a major source with a site rating of less than 100 HP

Standards:

- Change oil and filter (can use oil analysis program) and inspect spark plugs, hoses, and belts every 4,320 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

