



# 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 4-Stroke Lean  
Burn Engine <100 Horsepower**



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

Every 1,440 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 1,440 hours of operation 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 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, the results, and the oil changes.

- Program must be part of the engine maintenance plan.



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

Every 1,440 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...



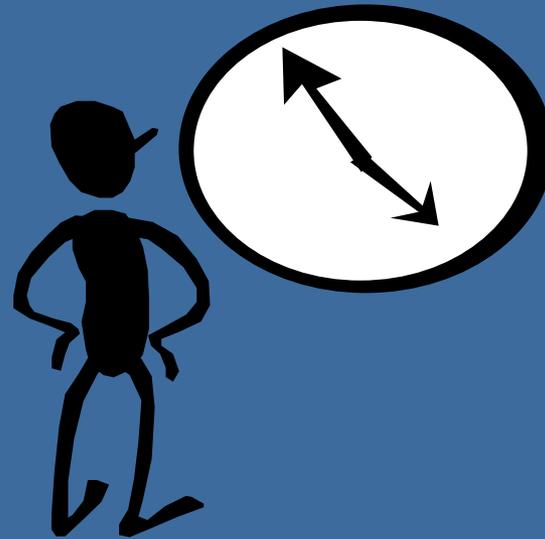
Photo credit: EPA

- 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 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

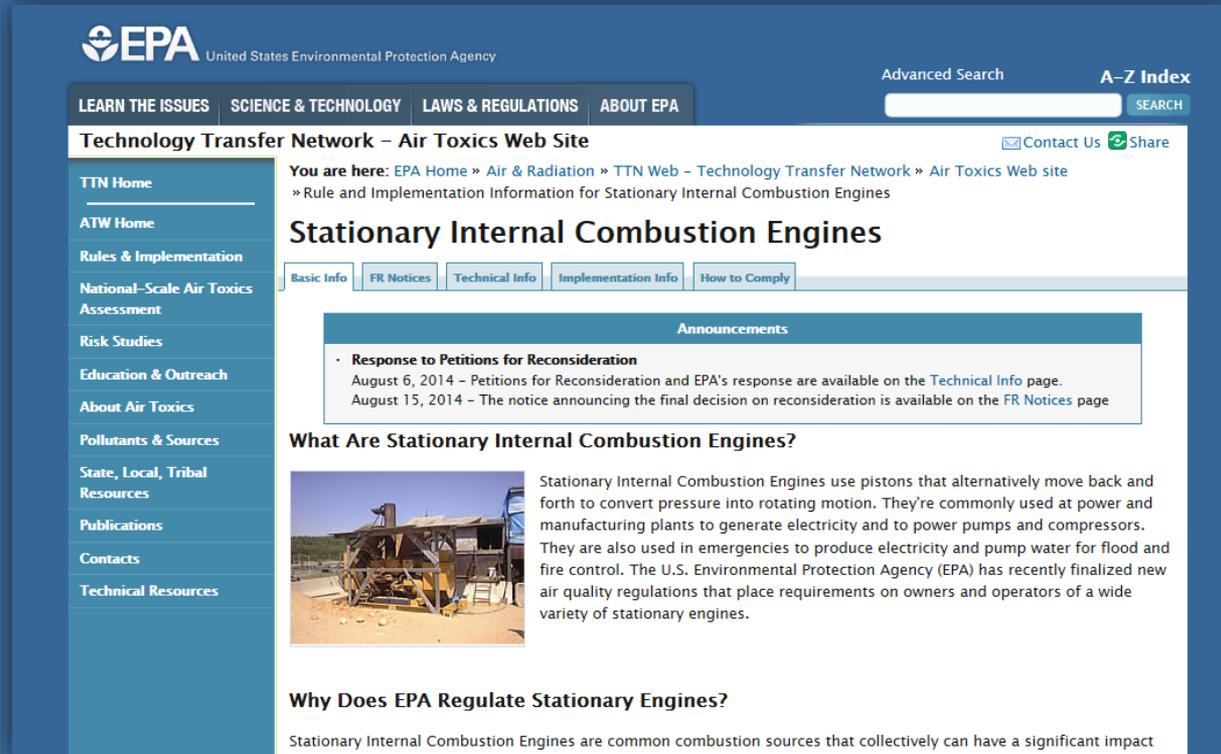


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# Visit the EPA RICE Compliance Page

[www.epa.gov/ttn/atw/icengines](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) page for 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 sidebar on the left lists various resources such as "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 features an "Announcements" section with a link to "Response to Petitions for Reconsideration" dated August 6, 2014, and another dated August 15, 2014. Below this is a section titled "What Are Stationary Internal Combustion Engines?" which includes a photograph of a large industrial engine and a brief description of its function. The page also includes a "Why Does EPA Regulate Stationary Engines?" section.



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# Take Aways

## Engine Type:

- An existing non-emergency spark ignition 4-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 1,440 hours or annually

## Monitoring:

- Operate/maintain engine according to manufacturer's instructions or develop your own 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

