



# 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  $\leq 500$  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 or annually, whichever comes first.

- Analysis 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, 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 standards:

Every 1,440 hours of operation or annually, whichever comes first, you must:

- Inspect spark plugs, hoses, and belts, 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 the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.**



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To demonstrate compliance with all rule requirements, 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?

Your compliance date is: **October 19, 2013**



Photo credit: EPA



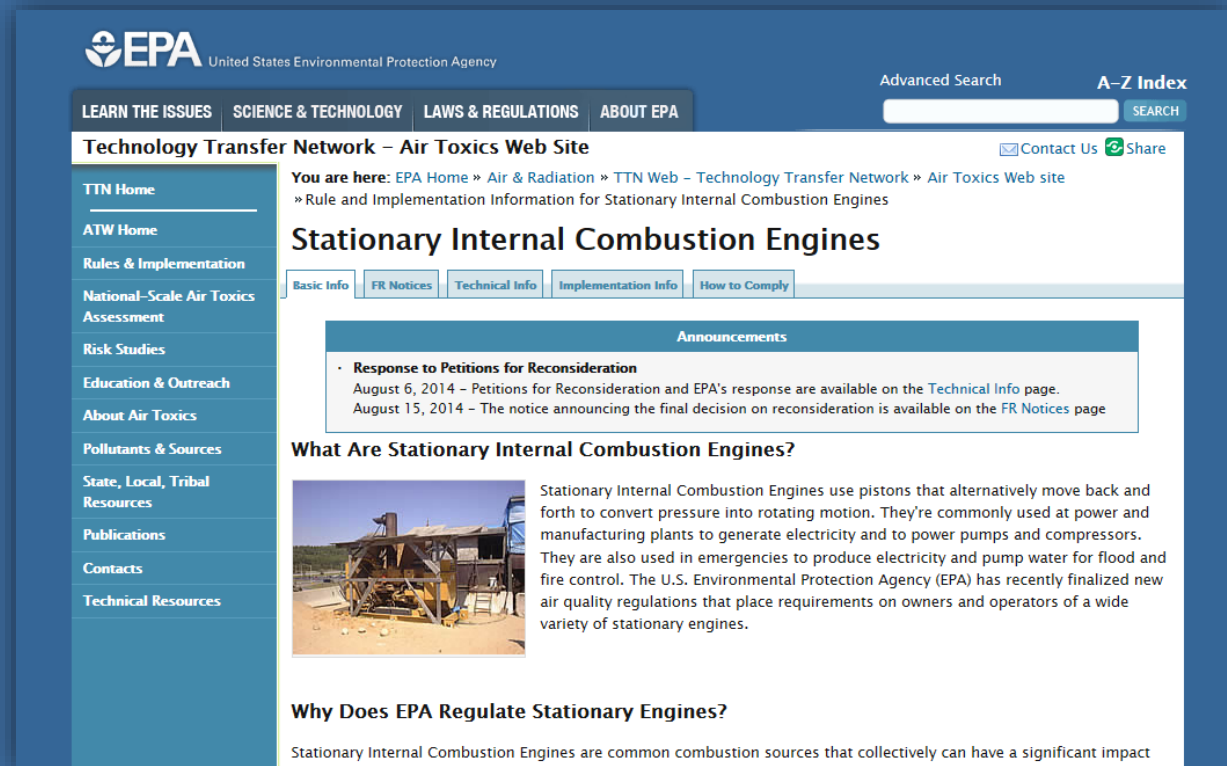
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# Visit the EPA RICE Compliance Page

[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 Stationary Internal Combustion Engines. The page features a navigation menu with categories like 'LEARN THE ISSUES', 'SCIENCE & TECHNOLOGY', 'LAWS & REGULATIONS', and 'ABOUT EPA'. A search bar and 'Advanced Search' option are visible. The main content area includes a breadcrumb trail: 'You are here: EPA Home » Air & Radiation » TTN Web – Technology Transfer Network » Air Toxics Web site » Rule and Implementation Information for Stationary Internal Combustion Engines'. The title 'Stationary Internal Combustion Engines' is prominently displayed, 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 6, 2014, and August 15, 2014. Below this, a section titled 'What Are Stationary Internal Combustion Engines?' includes a photograph of a large industrial engine and a descriptive paragraph. A final section, 'Why Does EPA Regulate Stationary Engines?', begins with the text: '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 4-stroke rich burn engine at an area source with a site rating of less than or equal to 500 HP

## Standards:

- Change oil and filter (can use oil analysis program) and inspect spark plugs, hoses, and belts every 1,440 hours or annually (replace as necessary)

## 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

