



Compliance Assistance ADVISORY

SUBJECT: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines (RICE)

Advisory #13-01

March 2013

IMPORTANT INFORMATION FOR OWNERS AND OPERATORS OF STATIONARY PRIME POWER ENGINES

On March 9, 2011, the Environmental Protection Agency (EPA) adopted a National Emission Standard (NESHAP) for reciprocating internal combustion engines (Subpart ZZZZ). EPA has made some changes and/or exemptions to the regulation since our first Advisory on the subject distributed in December 2011. This federal regulation is subject to **Stationary Engines** and not portable equipment such as tractors and transportable pumps.

Compression ignition engines installed before June 12, 2006 will need to comply by May 3, 2013 with lower emission standards and other additional requirements. Please see the table below to identify which standards your engine(s) is subject to.

Prime Power (Non-Emergency) Compression Ignition Engine Standards

HP ≤ 300

- Change oil and filter every 1,000 hours of operation or annually, whichever comes first
- Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first
- Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
- Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.

HP > 300 and ≤ 500

- Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O₂ (approximately 0.37 g/hp-hr); or
- Reduce CO emissions by 70 percent or more.
- Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
- Install a closed crankcase ventilation system or an open crankcase filtration emission control system.

OR

- If the engine is certified to a Tier I or II level and is subject to a State Regulation (Airborne Toxics Control Measure for Stationary Compression Ignition Engines, Title 17 CCR §93115) which will require the engine to meet certain emission standards or be removed from service by a certain date spelled out in the regulation, then this engine may be eligible to only have to comply with the Maintenance Management Practices described in the less than 300 HP category outlined above. (Contact the District to see if your engine is eligible)

HP > 500

- Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O₂ (approximately 0.17 g/hp-hr); or
- Reduce CO emissions by 70 percent or more.
- Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
- Install a closed crankcase ventilation system or an open crankcase filtration emission control system.
- Install a Continuous Parameter Monitoring System (CPMS) to continuously monitor catalyst inlet temperature or other appropriate engine operating parameter.

OR

- If the engine is certified to a Tier I or II level and is subject to a State Regulation (Airborne Toxics Control Measure for Stationary Compression Ignition Engines, Title 17 CCR §93115) which will require the engine to meet certain emission standards or be removed from service by a certain date spelled out in the regulation, then this engine may be eligible to only have to comply with the Maintenance Management Practices described in the less than 300 HP category outlined above. (Contact the District to see if your engine is eligible)

Spark ignition engines installed before June 12, 2006 will need to comply by October 19, 2013 with lower emission standards and other additional requirements. Please see the table below to identify which standards your engine(s) is subject to.

Prime Power (Non-Emergency) Spark Ignition Engine Standards

2 Stroke Lean Burn Engines

- Change oil and filter every 4,320 hours of operation or annually, whichever comes first.
- Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first.
- Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.
- Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.

4 Stroke Rich Burn and 4 Stroke Lean Burn ≤ 500 HP

- Change oil and filter every 1,440 hours of operation or annually, whichever comes first.
- Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first.
- Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.

4 Stroke Lean Burn > 500 HP

- Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd at 15percent O₂; or
- Reduce CO emissions by 93 percent or more
- Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
- Install a Continuous Parameter Monitoring System (CPMS) to continuously monitor catalyst inlet temperature or other appropriate engine operating parameter

4 Stroke Rich Burn > 500 HP

- Limit concentration of formaldehyde in the stationary RICE exhaust to 2.7 ppmvd at 15 percent O₂; or
- Reduce CO emissions by 76 percent or more.
- Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.

- Install a Continuous Parameter Monitoring System (CPMS) to continuously monitor catalyst inlet temperature or other appropriate engine operating parameter.

If you have any questions regarding these requirements, you may call Brian Krebs at (916) 874-4856 or the SMAQMD's *Compliance Assistance Hotline* at (916) 874-4884.