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FINAL NESHAP RULE FOR COMPRESSION-IGNITION RICE PUBLISHED

On March 3, 2010, USEPA published final national emission standards for hazardous air pollutants (NESHAPs) for existing compression-ignition (CI) reciprocating internal combustion engines (RICE). The effective date of the rule is May 3, 2010. USEPA will finalize requirements for existing stationary spark-ignition (SI) RICE ≤ 500 brake horsepower (bhp) located at major HAP sources, and existing SI RICE located at area sources by August 10, 2010.

The March 3, 2010 rule establishes standards for CI RICE located at area sources of HAP emissions; CI RICE located at major sources of HAP emissions with a site rating ≤ 500 bhp; and CI RICE located at major sources of HAP emissions, non-emergency with a site rating >500 bhp. The rule also revises provisions related to startup, shutdown, and malfunction previously regulated engines.

Note that existing emergency engines located at residential, commercial, or institutional facilities are not part of the source category and are not subject to any part of the rule.

A summary of the rule is as follows:

Existing CI RICE at Major Sources

- Non-emergency CI RICE – Emission Limitations, Testing Requirements & Compliance Determination
 - Emission Limitations

100 \leq HP \leq 300	230 ppmvd CO at 15% O ₂
300 $<$ HP \leq 500	49 ppmvd CO at 15% O ₂ or 70% CO reduction
>500 HP	23 ppmvd CO at 15% O ₂ or 70% CO reduction
 - Testing Requirements
 - For engines ≤ 500 HP, must conduct an initial test.
 - For engines > 500 HP, must conduct an initial test and test every 8,760 hours or 3 years, whichever comes first.
 - Compliance Determination and Operational Limitations
 - For engines >500 HP using an oxidation catalyst, must continuously monitor and record catalyst inlet temperature to ensure temperature is between 450 and 1,350 F; and must measure pressure drop across the catalyst to ensure that the pressure does not change more than 2 inches of water from the pressure drop measured during initial performance test.
 - If not using an oxidation catalyst, must monitor/record operating parameters approved by the Administrator.
- Non-emergency CI RICE >300 HP, Displacement < 30 liters/cylinder – Fuel Requirements

- Must use diesel fuel having maximum sulfur content of 15 ppm and either a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent, as detailed in 40 CFR 80.510(b).
- Non-emergency CI RICE <100 HP and Emergency CI RICE < 500 HP – Work Practice Standards
 - Change oil and filter every 500 hours (emergency), 1,000 hours (non-emergency), or annually, whichever comes first; or extend as part of the Oil Change Analysis Program.
 - Inspect air cleaner every 1,000 hours or annually, whichever comes first;
 - Inspect hoses and belts every 500 hours or annually, whichever comes first, and replace as necessary.
 - Must operate and maintain the RICE and any control device according to manufacturer’s emission-related written instructions, or develop own maintenance plan.
- Non-emergency CI RICE >300 HP – Capture and Collection Requirement
 - If the engine is not equipped with a closed crankcase ventilation system, must either install a closed crankcase ventilation system; or install an open crankcase filtration emission control system to remove oil mist, particulates and metal.

Existing CI RICE at Area Sources

- Non-emergency CI RICE Emission Limitations, Testing Requirements & Compliance Determination
 - Emission Limitations

300<HP≤500	49 ppmvd CO at 15% O ₂ or 70% CO reduction
>500 HP	23 ppmvd CO at 15% O ₂ or 70% CO reduction
 - Testing Requirements
 - For engines >300 HP, must conduct an initial test.
 - For engines > 500 HP, must conduct an initial test and test every 8,760 hours or 3 years, whichever comes first.
 - For engines that are “limited use” engines, must test every 8,760 hour or 5 years, whichever comes first.
 - Compliance Determination and Operational Limitations
 - For engines >500 HP using an oxidation catalyst, must continuously monitor and record catalyst inlet temperature to ensure temperature is between 450 and 1,350 F; and must measure pressure drop across the catalyst to ensure that the pressure does not change more than 2 inches of water from the pressure drop measured during initial performance test
 - If not using an oxidation catalyst, must monitor/record operating parameters approved by the Administrator.
- Non-emergency CI RICE >300 HP, Displacement < 30 liters/cylinder – Fuel Requirements
 - Must use diesel fuel having maximum sulfur content of 15 ppm and either a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent, as detailed in 40 CFR 80.510(b).

- Non-emergency CI RICE <300 HP and Emergency CI RICE – Management Practices
 - Change oil and filter every 500 hours (emergency), 1,000 hours (non-emergency), or annually, whichever comes first; or extend as part of the Oil Change Analysis Program.
 - Inspect air cleaner every 1,000 hours or annually, whichever comes first;
 - Inspect hoses and belts every 500 hours or annually, whichever comes first, and replace as necessary.
 - Must develop a maintenance plan to specify how these management practices will be implemented.
- Non-emergency CI RICE >300 HP – Capture and Collection Requirement
 - If the engine is not equipped with a closed crankcase ventilation system, must either install a closed crankcase ventilation system; or install an open crankcase filtration emission control system to remove oil mist, particulates and metal.

Startup Requirements

Owner/operators must minimize the engine's time spent at idle and minimize the engine's startup to a period needed for appropriate and safe loading of the engines, not to exceed 30 minutes, after which time the engine must meet the emission standards. The following engines are subject to these startup requirements:

- Existing CI RICE \leq 500 HP at major sources
- Existing non-emergency CI RICE >500 HP at major sources
- Existing CI RICE at area sources
- New/reconstructed non-emergency 2SLB >500 HP at major sources
- New/reconstructed non-emergency 4SLB \geq 250 HP at major sources
- Existing non-emergency 4SRB >500 HP at major sources
- New/reconstructed non-emergency 4SRB >500 HP at major sources
- New/reconstructed CI RICE >500 HP at major sources