

Compliance Guidance for Stationary Emergency Engines

This guidance has been developed to assist businesses that are utilizing the Permit-by-Rule option as a means of maintaining compliance with the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines (RICE), and the Standards of Performance for New Stationary (NSPS) Spark Ignition (SI) and Compression Ignition (CI) Internal Combustion Engines that are used as an emergency engine only.

The stationary emergency engines discussed in this guidance are operated to supply electrical power or mechanical work during emergency situations. They usually provide power to critical networks or equipment when power from a local utility or other normal source of power is interrupted, but may also be used for pumping water during a fire or flood. They may also be used in limited circumstances to supply power as part of a financial arrangement with another location if the local balancing authority or local transmission and distribution system operator calls on the emergency engine in order to prevent an interruption of power.

Permit-by-Rule and this guidance apply only to:

1. Area and minor sources
 - a. Sources that emit less than 10 tons/year of a single Hazardous Air Pollutant (HAP), and less than 25 tons/year of all HAP combined
 - b. Sources that are not Title V or Conditional Major sources.
2. Stationary Emergency IC Engines
 - a. Does not apply to mobile, Rankine cycle, or non-road engines.
 - b. Does not apply to engines manufactured prior to June 12, 2006, and are located at a commercial, institutional, or residential location that operate only for emergency situations or for recommended maintenance and readiness checks. See the NAICS list for further clarification based on business group.
 - i. Commercial emergency engines refer to those used at banks, hotels, offices, restaurants, sporting arenas, and telecommunications (cell towers) as examples.
 - ii. Institutional emergency engines refer to those used at churches, fire stations, hospitals, nursing homes, police stations, and schools as examples.
 - iii. Residential emergency engines refer to those used at apartment complexes or houses.

What limits are there on operating a stationary emergency engine?

Emergency engines are designed to be operated primarily in emergency situations. But, they can be operated for limited amounts of time outside of emergency situations. Here are the time limits on emergency engine operation:

1. No time limit during an emergency situation.
2. A maximum of 100 hours of non-emergency operation per calendar year as follows:
 - a. Recommended maintenance checks and readiness testing. If more than 100 hours are needed, a petition to the Technical Secretary of the TN Division of Air Pollution Control can be submitted requesting more time. This petition is not needed if records are kept that show more than 100 hours of maintenance or testing is recommended by standards for the engine.
 - b. *A maximum of 50 hours for nonemergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:
 - A. The engine is dispatched by the local balancing authority or local transmission and distribution system operator.
 - B. The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
 - C. The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
 - D. The power is provided only to the facility itself or to support the local transmission and distribution system.

- E. The owner identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.
- c. The maximum 50 hours of nonemergency operation count as part of the 100 hours per calendar year allowed.
- d. The 50 hours of nonemergency operation cannot be used for peak shaving, nonemergency demand response, or generating income for the facility to an electric grid.

*If the engine is greater than 100 horsepower, and used in nonemergency situations to supply power as part of a financial arrangement with another entity, the owner must keep records of the date, start time, and end time of the engine operated for these purposes, and must submit an annual report using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx).

Complying with the rules

All owners and operators of stationary emergency engines must determine the manufacture date of the engine.

For all engines that are manufactured prior to April 1, 2006, the engine owners/operators must:

1. Change the oil and filter every 500 hours of operation or annually, whichever comes first.
 - a. An oil analysis program can be used to show that changing the oil is not necessary. The analysis must be performed as frequently as oil changes are required and will analyze Total Base (for CI) or Acid (for SI) number, viscosity, and percent water content. These three parameters must meet certain criteria in order for the oil to continue being used.
2. Inspect the air cleaner for CI engines, and inspect the spark plug for SI engines every 1000 hours of operation or annually, whichever comes first. Replace as necessary.
3. Inspect all the hoses and belts every 500 hours of operation or annually, whichever comes first. Replace as necessary.
4. Install a non-resettable hour meter, if one is not already installed. Keep records of the operation of the engine in emergency and non-emergency service.
5. Operate and maintain the engine and associated after-treatment control devices (if any) according to the manufacturer's recommendations or,
6. Develop a maintenance plan to maintain and operate the engine in a manner consistent with good air pollution control practices for minimizing emissions.

For CI engines that are manufactured after April 1, 2006, SI engines greater than 25 horsepower and manufactured after January 1, 2009, and SI engines less than or equal to 25 horsepower and manufactured after July 1, 2008, the engine owners/operators must:

1. Use Ultra Low Sulfur Diesel, if a CI engine
2. Be certified by the manufacturer as meeting the standards for the same model year and maximum engine power. To maintain certification you must:
 - a) Install and configure the engine according to the manufacturer's emission-related specifications;
 - b) Operate and maintain the engine and control device (if present) according to the manufacturer's emission-related written instructions;
 - c) Change only those emission-related settings that are permitted by the manufacturer.
3. If the engine has a label that states that the engine is for **stationary emergency use only**, a non-resettable hour meter must be installed, and you must:
 - a) Keep records of the operation of the engine in emergency and non-emergency service that is recorded through the non-resettable hour meter.
 - b) Record the time of operation of the engine and the reason the engine was in operation during that time