

National Emission Standards for Hazardous Air Pollutants for
Reciprocating Internal Combustion Engines (RICE Rule) Training Module
40 CFR 63 Subpart ZZZZ
Script- Area Source New Emergency Engine ≤500 Horsepower

NARRATOR:

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Welcome to the Connecticut Department of Energy & Environmental Protection's Online Training for the National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines, also known as the RICE Rule!

This tool is designed to help owners and operators of reciprocating internal combustion engines, also known as RICE, determine their requirements under 40 CFR Section 63, subpart ZZZZ. By answering the successive questions, your specific requirements have been estimated. Please note that they may not be complete, and refer any questions to your local authority.

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We have established that your unit is a new emergency engine, of 500 horsepower or less, located at an area source. Now, let's discuss your requirements.

You must comply with the rule by meeting the requirements in the Compression Ignition or Spark Ignition New Source Performance Standards, also known as "CI NSPS" and "SI NSPS." You must comply with the applicable requirements upon startup of the engine.

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You are subject to the CI NSPS, listed in 40 CFR 60 part IIII, if you own or operate a compression ignition engine that was constructed after July 11th, 2005 **and** manufactured after April 1st, 2006, or July 1st, 2006 for a fire pump engine. For the purposes of this rule, the date that construction commences is the date the engine is *ordered* by the owner or operator. You are also subject to the CI NSPS if you own or operate a compression ignition engine that was modified or reconstructed after July 11th, 2005.

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If you are subject to the CI NSPS, you must meet the following requirements:

- For emission limits, operating limits, testing requirements, and monitoring requirements, please refer to the table listed later in this module.
- All standards must be met for the life of the engine.

Now let's discuss your fuel requirements. As of October 1st, 2010, you must use ultra low sulfur diesel for engines having a displacement of less than 30 liters per cylinder. You may use up any diesel fuel acquired prior to October 1st, 2010 that does not meet the requirements for nonroad diesel fuel.

If your engine has a displacement greater than or equal to 30 liters per cylinder, you must use diesel fuel having a maximum per-gallon sulfur content of 1,000 parts per million as of June 1st, 2012.

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If you are subject to the CI NSPS, you must also meet the following requirements:

- If you own or operate a 2007 model year or later engine with a displacement less than 30 liters per cylinder or a fire pump engine, 2008 to 2011 model year or later, depending on engine size, you must:
 - Purchase a certified engine
 - Install, configure, operate and maintain the unit in accordance with the manufacturer's written instructions and procedures. Performance testing is not required. Note that you can operate in a manner other than that which the manufacturer has recommended; however, you must then complete a performance test to demonstrate compliance.
- If your engine is not required to be certified, you must employ one of the following methods for demonstrating compliance:
 - Purchase a certified engine, or
 - Keep records of a performance test conducted on a similar engine, or
 - Keep records of engine manufacturer data indicating compliance, or
 - Keep records of control device vendor data indicating compliance, or
 - Conduct an initial performance test.
- If your engine has a displacement of 30 liters per cylinder or greater, you must complete an initial performance test and continuously monitor the operating parameters.

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Next, we will discuss your recordkeeping and reporting requirements. You must install a non-resettable hour meter and record the engine's hours of operation. If your engine is equipped with a diesel particulate filter, you must install a backpressure monitor to notify when the high backpressure limit is approached and keep records of corrective actions taken after the backpressure monitor has given this notification.

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Please study this table to determine your applicable emission standards, importing and installing requirements, compliance requirements, testing requirements, and general requirements.

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You are subject to the SI NSPS, listed under 40 CFR 60 subpart JJJJ, if your emergency spark ignition engine was constructed after June 12th, 2006 **and either:** is greater than 25 horsepower and manufactured on or after January 1st, 2009 or is less than or equal to 25 horsepower and manufactured on or after July 1, 2008. For the purposes of this rule, the date that construction commences is the date the engine is ordered by the owner or operator. You are also subject to the SI NSPS if your emergency spark ignition engine was modified or reconstructed after June 12th, 2006.

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If your engine is subject to the SI NSPS, you must meet the following requirements:

- For applicable emission limits, operating limits, testing requirements, and monitoring requirements, please refer to the table listed later in this module.
- You must meet all standards for the life of the engine.

Now let's discuss your fuel requirements. If your engine runs on gasoline, the gasoline must comply with the sulfur limit of 80 parts per million per gallon.

If you have a certified engine:

- You must install, operate, and maintain the unit in accordance with the manufacturer's written instructions.
- If you do not adhere to the manufacturer's instructions and your engine is greater than or equal to 100 horsepower, you must keep a maintenance plan and maintenance records, and operate the engine in accordance with good air pollution control practices. Failure to adhere to the manufacturer's instructions

would also result in the requirement to perform an initial performance test. You are not required to conduct subsequent testing unless the engine is rebuilt or undergoes major repair or maintenance.

If your engine is not certified and is greater than 25 horsepower:

- You must keep a maintenance plan; and
- Conduct an initial performance test. You are not required to conduct subsequent testing unless the engine is rebuilt or undergoes major repair or maintenance.

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You must install a non-resettable hour meter to record emergency engine hours of operation if your engine is 500 horsepower and built on or after July 1st, 2010, 130 horsepower or greater and built on or after January 1st, 2011, or less than 130 horsepower and built on or after July 1st, 2008.

All engines subject to the SI NSPS are required to keep the following records:

- Documentation of certification (for example, the EPA Certificate of Conformity)
- Records of engine maintenance
- Records of hours of operation

You must submit an Initial Notification if you own or operate a non-certified engine that is equal to 500 horsepower. A Notification of Intent to Conduct Performance Testing must be submitted 30 days prior to a performance test. Results of performance testing must be submitted within 60 days of the test.

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In case you're not familiar with an EPA Certificate of Conformity, here's what it looks like.

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Please study this table to determine your applicable emission standards, importing and installing requirements, compliance requirements, testing requirements, reporting requirements, and general requirements.

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Now let's talk about your NSPS Emergency Engine Requirements. There is no limit on the hours you may operate for emergency service.

You are allowed 100 hours of operation per year in total for any combination of the following purposes:

- Maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. You can petition EPA for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if you maintain records indicating that federal, state, or local standards require maintenance and testing of emergency engines beyond 100 hours per calendar year.
- 50 of the 100 hours of operation can be used for non-emergency purposes. These 50 hours cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement *unless all* of the conditions shown here are met.

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If the emergency engine operates for more than the allowable hours for non-emergency purposes, it will need to meet all non-emergency engine requirements.

Engines located in Connecticut are required to comply with the Connecticut emergency engine requirements. Likewise, engines located elsewhere must adhere to any applicable State emergency engine requirements.

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Beginning in 2015, if your engine operates for local reliability criteria, and your engine has a maximum power that exceeds 100 horsepower, you must:

- Submit an annual report each year. The report must contain:
 - The address where the engine is located
 - The date of the report
 - The beginning and ending dates of the reporting period
 - The engine site rating and model year
 - The latitude and longitude of the engine in decimal degrees reported to the fifth decimal place
 - Hours spent operating to supply power as part of a financial arrangement with another entity. These records should include the date, start time, and end time of engine operation, the entity that dispatched the engine, and the situation that required the dispatch.
 - If no deviations occurred from the fuel requirements that apply to the engine, a statement indicating so.
 - Lastly, if there were any deviations, information on the number of deviations, cause, and the corrective actions taken.
- The first report will cover calendar year 2015, and is due on March 31st, 2016.
- The annual report will be required to be submitted electronically. The form for the report can be found in the “Compliance and Emissions Data Reporting Interface,” which can be accessed through EPA’s Central Data Exchange. Use the address provided here if you would like to visit EPA’s Central Data Exchange.

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Now, we will discuss the Connecticut Emergency Engine Requirements. According to the Regulations of Connecticut State Agencies Section 22a-174-22(a)(3), an emergency engine provides mechanical or electrical power only during testing and scheduled maintenance, during an actual emergency, or in accordance with a contract ensuring electricity for use within the state during an OP 4, Step 6 event. An engine for which the owner or operator is party to any other agreement to sell electrical power from such engine to an electricity supplier, or otherwise receives any reduction in the cost of electrical power for agreeing to produce power during periods of reduced voltage or reduced power availability is **not** considered an emergency engine in the state of Connecticut.

Engines operating under Sections 22a-174-3b and 3c of the Regulations of Connecticut State Agencies are subject to additional requirements.

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Here is a summary of the Connecticut emergency engine requirements. To qualify as an emergency engine in Connecticut, you must only operate during emergencies, maintenance, scheduled testing, or during an OP-4 Step 6 event. There is no limit on the number of hours that can be used for emergency operation, unless your engine is subject to Section 22a-174-3b or 3c of the Regulations of Connecticut State Agencies, or RCSA. Emergency engines in Connecticut cannot be used as part of any other agreement or financial arrangement with another entity.

Engines operating under RCSA Section 22a-174-3b are limited to 300 hours per year for emergency operation. Any nongaseous fuel consumed by these engines shall not exceed a sulfur content of 0.0015%, dry basis.

Engines operating under RCSA Section 22a-174-3c have no restriction on the hours of use or fuel sulfur content. However, the total facility purchases of fuel are extremely limited.

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This table shows a comparison of federal and State of Connecticut emergency engine requirements.

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All notifications and reports should be sent to EPA Region 1 at the address shown here.

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If you would like more information about the RICE rule, please visit the EPA RICE Compliance web page at the address provided. This site provides resources such as Q and A documents, fact sheets, sample notification forms, and recordings of webinars, all of which are designed to help you comply with this rule.

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Let's summarize the requirements for your new or reconstructed emergency engine at an area source with a site rating of 500 horsepower or less.

You must comply with all Compression Ignition or Spark Ignition New Source Performance Standards requirements, as applicable.

You must comply with all New Source Performance Standards and State emergency engine requirements.

You must be in compliance with all requirements upon startup of the engine.