

RULE 400.3 INTERNAL COMBUSTION ENGINE(S)
(Adopted 10/22/2013)

A APPLICABILITY

- A.1 The provisions of this Rule shall apply to any Internal Combustion Engine(s) with a brake horsepower (bhp) rating greater than 50 that requires a Permit to Operate (PTO), except as provided in Section D.
- A.2 Internal Combustion Engine(s) subject to the provisions of this Rule shall not be subject to Rule 400.

B DEFINITIONS

The following definitions apply to all terms applicable to this Rule. If a term is not defined in this Rule, then the definitions provided in Rule 101 shall apply.

INTERNAL COMBUSTION ENGINE: any spark or compression ignited reciprocating Internal Combustion Engine that is attached to a foundation at a location, or is portable and operated at a location for more than 90 days in any consecutive twelve (12) month period, excluding engines used for self propulsion of a vehicle.

LEAN-BURN ENGINE: any spark or compression ignited Internal Combustion Engine that is operated with an exhaust gas stream oxygen concentration of four percent (4%) by volume, or greater. The exhaust gas oxygen content shall be determined from the uncontrolled exhaust gas stream.

RATED BRAKE HORSEPOWER: the maximum Rated Brake Horsepower specified for the engine by the manufacturer and listed on the units nameplate, regardless of any derating, unless limited by the engine's PTO.

RICH-BURN ENGINE: any spark or compression ignited Internal Combustion Engine that is operated with an exhaust gas stream oxygen concentration of less than four percent (4%) by volume. The exhaust gas oxygen content shall be determined from the uncontrolled exhaust gas stream.

VALID: under the provisions of this Rule, as long as the certification is current and does not exceed the maximum hours.

C REQUIREMENTS

- C.1 The emission concentration of NO_x in ppmv, calculated as nitrogen dioxide (NO₂) at 15% oxygen on a dry basis, are not greater than the limits in Table 400.3-1.

Table 400.3-1

| Engine Type | NOx Limits |
|-------------|------------|
| Rich-Burn | 90 |
| Lean-Burn | 150 |
| Diesel | 600 |

C.2 For all engines subject to Subsection C.1 of this Rule, emissions of carbon monoxide (CO), calculated at 15% oxygen on a dry basis shall not exceed 2500 ppmv.

D EXEMPTIONS

The provisions of this Rule shall not apply to the following engine(s):

- D.1 The operation of any engine while being used to preserve or protect property, human life, or public health during the existence of a disaster or state of emergency;
- D.2 Engines used directly and exclusively for the growing of crops or the raising of animals that are located within facilities that are not exempt under Rule 202, Exemptions, Section E.10;
- D.3 Gas turbine engines;
- D.4 New or existing emergency stand-by engines which operate 100 hours or less per calendar year for the purpose of testing and maintenance shall be exempt from the requirements of Section C, and;
- D.5 Existing Internal Combustion Engines to be permanently replaced with electric motors or removed from service by April 22, 2014 based upon a permit condition, contract, or binding agreement with the District.

E RECORDKEEPING REQUIREMENTS

- E.1 The Owner or Operator of any Internal Combustion Engine subject to the provisions of this Rule shall maintain an engine operating log on-site for each month or any part of a month that the device is operated that includes the following:
 - E.1.a Engine(s) manufacturer name and model number, brake horsepower output rating, combustion method (i.e. Rich or Lean Burn or diesel).

- E.1.b A manual of recommended maintenance as provided by the engine(s) manufacturer or other maintenance procedure as approved in writing by the Air Pollution Control Officer (APCO).
 - E.1.c Record of routine engine(s) maintenance, including date(s) and type of maintenance performed.
 - E.1.d A specific emission inspection procedure to assure that the engine is operated in continual compliance with the provisions of this Rule. The procedure shall include an inspection schedule. Inspections shall be conducted every quarter or after every 2,000 hours of engine operation. In no event shall the frequency of inspections be less than once per year.
 - E.1.e Total recorded hours of operation or calculated hours of operation based upon fuel usage.
 - E.1.f Type of fuel combusted.
- E.2 In addition to the records required in Subsection E.1, an Owner or Operator of an engine(s) subject to this Rule shall install a non-resettable fuel consumption meter or a non-resettable elapsed time meter.
- F TEST METHODS
- F.1 Compliance with the requirements of Section C shall be determined In accordance with the following test procedures or any other method approved by the United States Environmental Protection Agency (US EPA) and/or the California Air Resources Board (CARB).
- F.1.a NOx emissions for compliance source tests shall be determined by using CARB Method 100 or US EPA Method 7E.
 - F.1.b Oxygen content for compliance source tests shall be determined by using CARB Method 100 or US EPA Method 3A.
 - F.1.c Carbon monoxide emissions for compliance source tests shall be determined by using CARB Method 100 or US EPA Method 10.
- G COMPLIANCE TESTING
- G.1 The Owner or Operator of any Internal Combustion Engine with a bhp rating less than 500 shall demonstrate compliance using one of the following:

- G.1.a For diesel fueled engines, off-road engine certification data for the stationary diesel-fueled engine, or
 - G.1.b Engine manufacturer test data, or
 - G.1.c Engine emission compliance source test.
- G.2 The Owner or Operator of any Internal Combustion Engine with a bhp rating of 500 or greater shall demonstrate compliance through emission compliance testing not less than once every 36 months. All emission rates shall be based on an hourly average. The Owner or Operator shall perform initial source test to demonstrate compliance within one year of start up or adoption of this Rule, thereafter frequency of compliance testing may be extended under the following:
- G.2.a The frequency of compliance testing may be extended to not less than every 60 months for Internal Combustion Engine(s) which operate less than 500 hours per 12 month period (as demonstrated by operational logs) and which emit less than 5 tons of NO_x per 12 month period. This period may be extended if a source can prove that the engine(s) has not been operated during the calendar year.
 - G.2.b The frequency of compliance testing may be extended to not less than every 60 months for Internal Combustion Engine(s) which use a portable NO_x analyzer to take NO_x emission readings to verify compliance with the emission limits in Section C during each quarter in which a source test is not performed. All emission reading shall be taken with the engine operating either at conditions representative of normal operations or conditions specified in the PTO. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations and the Protocol for the Periodic Monitoring of Nitrogen Oxides, Carbon Monoxide, and Oxygen from Stationary Engines Subject to South Coast Air Quality Management District Rule 1110.2, approved on February 1, 2008, or subsequent protocol approved by US EPA and the APCO. NO_x emission readings taken pursuant to this section shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period.
- G.3 For the purpose of a compliance determination based on source testing, the NO_x emissions concentration shall be calculated as an average of three test runs.

- G.4 At least 30 days prior to the scheduled source test date, the Owner or Operator of a unit subject to this Rule shall submit a source test plan to the APCO. At least seven days prior to the source test, the Owner or Operator shall notify the APCO of the exact date and time of the source test. A final source test result shall be submitted to the APCO within 30 days following the actual source test date.

H RECORDS RETENTION

- H.1 The Owner or Operator of any Internal Combustion Engine(s) subject to this Rule shall maintain all records required by this Rule for a minimum of two (2) calendar years. Title V facilities shall maintain these records for five (5) calendar years. These records shall be maintained on the premises and made available to the District upon request.

I COMPLIANCE SCHEDULE

- I.1 The Owner or Operator of any Internal Combustion Engine(s) subject to the requirements of this Rule which are not in compliance with the thresholds pursuant to Section C, may be granted an extension for compliance provided the following criteria is met:
- I.1.a No later than six (6) months after Rule adoption, an Owner or Operator shall submit for approval by the APCO an Authority to Construct (ATC)/PTO application amendment. The application shall include the following supplemental information:
1. PTO number.
 2. Fuel Type;
 3. Annual fuel consumption (Btu/yr);
 4. Current emission level, including method used to determine emission level; and
 5. Plan of actions, including a schedule of increments of progress, which will be taken to satisfy the requirements of Section C and the compliance schedule in Section I.1.b; and
 6. Any other information the District deems necessary for the completion of the application.
- I.1.b Any Internal Combustion Engine(s) not in compliance with the thresholds in Section C shall demonstrate full compliance with all applicable standards and requirements of this Rule no later than one year after Rule adoption.
- I.2 Any person installing a new unit shall comply with all applicable provisions of this Rule upon initial installation and startup.