engine shall be used with all accessories which might reasonably be expected to influence emissions to the atmosphere installed and functioning, if not otherwise prohibited by §87.62(a)(2). Use of service air bleed and shaft power extraction to power auxiliary gearbox-mounted components required to drive aircraft systems is not permitted.

(e) Other gaseous emissions measurement systems may be used if shown to yield equivalent results and if approved in advance by the Administrator or the Secretary.


§ 87.61 Turbine fuel specifications.

For exhaust emission testing, fuel meeting the specifications listed in this section shall be used. Additives used for the purpose of smoke suppression (such as organometallic compounds) shall not be present.

Property and Allowable Range of Values

Density kg/m³ at 15 °C: 780–820.
Distillation temperature, °C: 10% boiling point, 155–201; final boiling point, 235–285.
Net heat of combustion, MJ/kg: 42.66–43.50.
Aromatics, volume %: 15–23.
Naphthalenes, volume %: 1.0–3.5.
Smoke point, mm: 20–28.
Hydrogen, mass %: 13.4–14.1.
Sulfur, mass %: less than 0.3%.
Kinematic viscosity at 20 °C, mm²/s: 2.5–6.5.


§ 87.62 Test procedure (propulsion engines).

(a)(1) The engine shall be tested in each of the following engine operating modes which simulate aircraft operation to determine its mass emission rates. The actual power setting, when corrected to standard day conditions, should correspond to the following percentages of rated output. Analytical correction for variations from reference day conditions and minor variations in actual power setting should be specified and/or approved by the Secretary:

(b) Emissions testing shall be conducted on warmed-up engines which have achieved a steady operating temperature.


§ 87.63 [Reserved]

§ 87.64 Sampling and analytical procedures for measuring gaseous exhaust emissions.

(a) The system and procedures for sampling and measurement of gaseous emissions shall be as specified by Appendices 3 and 5 to ICAO Annex 16 (incorporated by reference in §87.8).

(b) Starting January 1, 2011, report CO₂ values along with your emission levels of regulated NOₓ to the Administrator for engines of a type or model of which the date of manufacture of the first individual production model was on or after January 1, 2011. By January 1, 2011, report CO₂ values along with your emission levels of regulated NOₓ to the Administrator for engines currently in production and of a type or...