

which the date of manufacture of the individual engine was on or before December 31, 1999:

Oxides of Nitrogen: $(40+2(\text{rPR}))$ grams/kilonewtons rO.

(iv) Engines of a type or model of which the date of manufacture of the first individual production model was after December 31, 1995, or for which the date of manufacture of the individual engine was after December 31, 1999:

Oxides of Nitrogen: $(32+1.6 (\text{rPR}))$ grams/kilonewtons rO.

(v) The emission standards prescribed in paragraphs (d)(1)(iii) and (iv) of this section apply as prescribed beginning July 7, 1997.

(vi) The emission standards of this paragraph apply as prescribed after December 18, 2005. For engines of a type or model of which the first individual production model was manufactured after December 31, 2003:

(A) That have a rated pressure ratio of 30 or less and a maximum rated output greater than 89 kilonewtons: Oxides of Nitrogen: $(19 + 1.6 (\text{rPR}))$ grams/kilonewtons rO.

(B) That have a rated pressure ratio of 30 or less and a maximum rated output greater than 26.7 kilonewtons but not greater than 89 kilonewtons: Oxides of Nitrogen: $(37.572 + 1.6(\text{rPR}) - 0.2087(\text{rO}))$ grams/kilonewtons rO.

(C) That have a rated pressure ratio greater than 30 but less than 62.5, and a maximum rated output greater than 89 kilonewtons: Oxides of Nitrogen $(7 + 2(\text{rPR}))$ grams/kilonewtons rO.

(D) That have a rated pressure ratio greater than 30 but less than 62.5, and a maximum rated output greater than 26.7 kilonewtons but not greater than 89 kilonewtons: Oxides of Nitrogen: $(42.71 + 1.4286(\text{rPR}) - 0.4013(\text{rO}) + 0.00642(\text{rPR} \times \text{rO}))$ grams/kilonewtons rO.

(E) That have a rated pressure ratio of 62.5 or more: Oxides of Nitrogen: $(32 + 1.6 (\text{rPR}))$ grams/kilonewtons rO.

(2) For Class TSS Engines manufactured on or after January 1, 1984:

Hydrocarbons= $140 (0.92)^{\text{rPR}}$ grams/kilonewtons rO.

(e) Smoke exhaust emissions from each gas turbine engine of the classes specified below shall not exceed:

(1) Class TF of rated output less than 26.7 kilonewtons (6000 pounds) manufactured on or after August 9, 1985

$\text{SN}=83.6(\text{rO})^{-0.274}$ (rO is in kilonewtons) not to exceed a maximum of SN=50.

(2) Classes T3, T8, TSS, and TF of rated output equal to or greater than 26.7 kilonewtons (6000 pounds) manufactured on or after January 1, 1984

$\text{SN}=83.6(\text{rO})^{-0.274}$ (rO is in kilonewtons) not to exceed a maximum of SN=50.

(3) For Class TP of rated output equal to or greater than 1,000 kilowatts manufactured on or after January 1, 1984:

$\text{SN}=187(\text{ro})^{-0.168}$ (ro is in kilowatts)

(f) The standards set forth in paragraphs (a), (b), (c), (d), and (e) of this section refer to a composite gaseous emission sample representing the operating cycles set forth in the applicable sections of subpart G of this part, and exhaust smoke emissions emitted during operations of the engine as specified in the applicable sections of subpart H of this part, measured and calculated in accordance with the procedures set forth in those subparts.

[Doc. No. 25613, 55 FR 32861, Aug. 10, 1990; 55 FR 37287, Sept. 10, 1990, as amended by Amdt. 34-3, 64 FR 5559, Feb. 3, 1999; Amdt. 34-4, 74 FR 19127, Apr. 28, 2009]

Subpart D—Exhaust Emissions (In-use Aircraft Gas Turbine Engines)

§ 34.30 Applicability.

The provisions of this subpart are applicable to all in-use aircraft gas turbine engines certificated for operation within the United States of the classes specified, beginning on the dates specified in § 34.31.

§ 34.31 Standards for exhaust emissions.

(a) Exhaust emissions of smoke from each in-use aircraft gas turbine engine of Class T8, beginning February 1, 1974, shall not exceed a smoke number (SN) of 30.

(b) Exhaust emissions of smoke from each in-use aircraft gas turbine engine