§ 87.21 Exhaust emission standards for Tier 4 and earlier engines.

(a) Exhaust emissions of smoke from each new aircraft gas turbine engine of class T8 manufactured on or after February 1, 1974, shall not exceed: Smoke number of 30.

(b) Exhaust emissions of smoke from each new aircraft gas turbine engine of class TF and of rated output of 129 kilonewtons thrust or greater, manufactured on or after January 1, 1976, shall not exceed:

\[ SN = 83.6(r_0)^{0.274} \]

(c) Exhaust emission of smoke from each new aircraft gas turbine engine of class T3 manufactured on or after January 1, 1978, shall not exceed: Smoke number of 25.

(d) Gaseous exhaust emissions from each new commercial aircraft gas turbine engine shall not exceed:

(1) Classes TF, T3, T6 engines greater than 26.7 kilonewtons rated output:

(i) Engines manufactured on or after January 1, 1984:

Hydrocarbons: 19.6 grams/kilonewton rO.

(ii) Engines manufactured on or after July 7, 1997.

Carbon Monoxide: 118 grams/kilonewton rO.
§ 87.23 Exhaust emission standards for Tier 6 and Tier 8 engines.

This section describes the emission standards that apply for Tier 6 and Tier 8 engines. The standards of this section apply for aircraft engines manufactured on or after July 18, 2012, except where we specify that they apply differently by year, or where the engine is exempt from one or more standards of this section. Except as specified in paragraph (d) of this section, these standards apply based on the date the engine is manufactured. Where a gaseous emission standard is specified by a formula, calculate and round the standard to the nearest 0.1 g/kN (for standards at or above 100 g/kN). Where a smoke standard is specified by a formula, calculate and round the standard to the