§ 34.21 Standards for exhaust emissions.

(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 a smoke number (SN) of 30.

(b) Exhaust emissions of smoke from each new aircraft gas turbine engine of class TF and of rated output of 129 kN (29,000 lb) thrust or greater, manufactured on or after January 1, 1976, shall not exceed

\[
SN = 83.6 \cdot \frac{rO}{100} - 0.274 \cdot \frac{rO}{100} \quad (rO \text{ is in kN}).
\]

(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 a smoke number (SN) of 25.

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

(i) For Classes TF, T3, T8 engines greater than 26.7 kN (6,000 lb) rated output:

\[
\begin{align*}
\text{Hydrocarbons:} & \quad 19.6 \text{ g/kN } rO. \\
\text{Carbon Monoxide:} & \quad 118 \text{ g/kN } rO.
\end{align*}
\]

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

\[
\begin{align*}
\text{Oxides of Nitrogen:} & \quad (40 + 2(rPR)) \text{ g/kN } rO.
\end{align*}
\]

(iii) Engines of a type or model of which the date of manufacture of the first individual production model was on or before December 31, 1995, and for which the date of manufacture of the individual engine was on or before December 31, 1999 (Tier 2):

\[
\begin{align*}
\text{Hydrocarbons:} & \quad 19.6 \text{ g/kN } rO. \\
\text{Carbon Monoxide:} & \quad 118 \text{ g/kN } rO. \\
\text{Oxides of Nitrogen:} & \quad (40 + 2(rPR)) \text{ g/kN } rO.
\end{align*}
\]

(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