Federal Aviation Administration, DOT

§ 23.1111  Turbine engine bleed air system.

For turbine engine bleed air systems, the following apply:

(a) Each screen must be upstream of the carburetor or fuel injection system.
(b) No screen may be in any part of the induction system that is the only passage through which air can reach the engine, unless—
(1) The available preheat is at least 100 °F.; and
(2) The screen can be deiced by heated air;
(c) No screen may be deiced by alcohol alone; and
(d) It must be impossible for fuel to strike any screen.


§ 23.1107  Induction system filters.

If an air filter is used to protect the engine against foreign material particles in the induction air supply—
(a) Each air filter must be capable of withstanding the effects of temperature extremes, rain, fuel, oil, and solvents to which it is expected to be exposed in service and maintenance; and
(b) Each air filter shall have a design feature to prevent material separated from the filter media from interfering with proper fuel metering operation.

[Doc. No. 28344, 58 FR 18974, Apr. 9, 1993, as amended by Amdt. 23–51, 61 FR 5137, Feb. 9, 1996]

§ 23.1109  Turbocharger bleed air system.

The following applies to turbocharged bleed air systems used for cabin pressurization:
(a) The cabin air system may not be subject to hazardous contamination following any probable failure of the turbocharger or its lubrication system.
(b) The turbocharger supply air must be taken from a source where it cannot be contaminated by harmful or hazardous gases or vapors following any probable failure or malfunction of the engine exhaust, hydraulic, fuel, or oil system.

[Amend. 23–42, 56 FR 354, Jan. 3, 1991]
§ 23.1121 Exhaust System

(a) No hazard may result if duct rupture or failure occurs anywhere between the engine port and the airplane unit served by the bleed air.

(b) The effect on airplane and engine performance of using maximum bleed air must be established.

(c) Hazardous contamination of cabin air systems may not result from failures of the engine lubricating system.


§ 23.1123 Exhaust system.

(a) Each exhaust system must be fireproof and corrosion-resistant, and must have means to prevent failure due to expansion by operating temperatures.

(b) Each exhaust system must be supported to withstand the vibration and inertia loads to which it may be subjected in operation.

(c) Parts of the system connected to components between which relative motion could exist must have means for flexibility.


§ 23.1125 Exhaust heat exchangers.

For reciprocating engine powered airplanes the following apply:

(a) Each exhaust heat exchanger must be constructed and installed to withstand the vibration, inertia, and other loads that it may be subjected to in normal operation. In addition—

(1) Each exchanger must be suitable for continued operation at high temperatures and resistant to corrosion from exhaust gases;

(2) There must be means for inspection of critical parts of each exchanger; and

(3) Each exchanger must have cooling provisions wherever it is subject to contact with exhaust gases.

(b) Each heat exchanger used for heating ventilating air must be constructed so that exhaust gases may not enter the ventilating air.