

## VENTILATION AND HEATING

### JAR 25.831 Ventilation

(a) Each passenger and crew compartment must be ventilated and each crew compartment must have enough fresh air (but not less than 10 cubic ft per minute per crew member) to enable crew members to perform their duties without undue discomfort or fatigue. (See ACJ 25.831(a).)

(b) Crew and passenger compartment air must be free from harmful or hazardous concentrations of gases or vapours. In meeting this requirement, the following apply:

(1) Carbon monoxide concentrations in excess of one part in 20 000 parts of air are considered hazardous. For test purposes, any acceptable carbon monoxide detection method may be used.

[ (2) Carbon dioxide concentration during flight must be shown not to exceed 0.5% by volume (sea level equivalent) in compartments normally occupied by passengers or crew members. For the purpose of this sub-paragraph, "sea level equivalent" refers to conditions of 25°C (77° F) and 760 millimetres of mercury pressure (1 013.2 hPa). ]

(c) There must be provisions made to ensure that the conditions prescribed in sub-paragraph (b) of this paragraph are met after reasonably probable failures or malfunctioning of the ventilating, heating, pressurisation or other systems and equipment. (See ACJ 25.831(c).)

(d) If accumulation of hazardous quantities of smoke in the cockpit area is reasonably probable, smoke evacuation must be readily accomplished, starting with full pressurisation and without depressurising beyond safe limits.

(e) Except as provided in sub-paragraph (f) of this paragraph, means must be provided to enable the occupants of the following compartments and areas to control the temperature and quantity of ventilating air supplied to their compartment or area independently of the temperature and quantity of air supplied to other compartments and areas:

(1) The flight-crew compartment.

(2) Crew-member compartments and areas other than the flight-crew compartment unless the crew-member compartment or area is ventilated by air interchange with other compartments or areas under all operating conditions.

(f) Means to enable the flight crew to control the temperature and quantity of ventilating air supplied to the flight-crew compartment independently of the temperature and quantity of ventilating air supplied to other compartments are not required if all of the following conditions are met:

(1) The total volume of the flight-crew and passenger compartments is 800 cubic ft or less.

(2) The air inlets and passages for air to flow between flight-crew and passenger compartments are arranged to provide compartment temperatures within 5°F of each other and adequate ventilation to occupants in both compartments.

(3) The temperature and ventilation controls are accessible to the flight crew.

(g) Reserved

[Amdt. 16, 01.05.03]