



Memorandum

U.S. Department
of Transportation
**Federal Aviation
Administration**

Subject: **ACTION:** Review and Concurrence, Equivalent Level of Safety to 14 CFR 23.853(d)(2), Passenger and Crew Compartment Interiors. Project Number AT3268WI-A. ; ACE-03-07

Date: April 22, 2004

From: Manager, Wichita ACO

Reply to Mr. Paul Nguyen
Attn. of: ACE-118W

To: Manager, Small Airplane Directorate, ACE-100

Attn:

BACKGROUND INFORMATION

The Model 525B is the first Cessna Citation aircraft to request certification under commuter category rules. For commuter category, per 14 CFR 23.853(d)(2), lavatories must have “No Smoking” or “No Smoking in Lavatory” placards located conspicuously on each side of the lavatory entry door. The placards are required to have red letters at least ½ inch high on a white background at least 1 inch high.

The Cessna Citation Models 525 and 525A are certified under normal category rules and do not require “No Smoking in Lavatory” placards. The Cessna Citation Models 550, 560, 560XL, 680, and 750 are certified under transport category rules and require a placard located conspicuously on each side of the lavatory entry door; however, there are no size or color requirements under the transport category rules for any of the current Cessna Citations in production. The former requirement for transport category aircraft was found in 14 CFR 25.853(c). The current requirement for transport category aircraft is found in 14 CFR 25.791(d).

Below is an overview of the current Cessna Citations in production and the Model 525B. The table includes each model’s certification basis, amendment level, fuselage diameter, and maximum passenger capacity.

	525	525A	525B	550 Bravo	560 Encore	560XL	680	750
Certification Basis	Part 23 Normal	Part 23 Normal	Part 23 Commuter	Part 25 Transport				
Amendment Level	40	51	54	17	17	82	98	74
Fuselage Diameter (approximate)	58”	58”	58”	58”	58”	67”	67”	67”
Cabin Length (B/H to B/H)	15’11”	18’10”	20’10”	20’11”	22’7”	21’5”	29’4”	28’4”
Maximum	6	8	9	11	11	12	13	12

The Model 525B has the same basic interior configuration as the Model 525A, except that the cabin length is increased approximately 24 inches to provide additional passenger legroom and storage space. The Model 525B has a similar interior configuration when compared to the Model 550 Bravo, except the Model 550 Bravo has provision for two additional passengers due to a different escape hatch location.

The Model 525B standard and optional floor plans can be seen in Figure 1 and Figure 2, respectively.

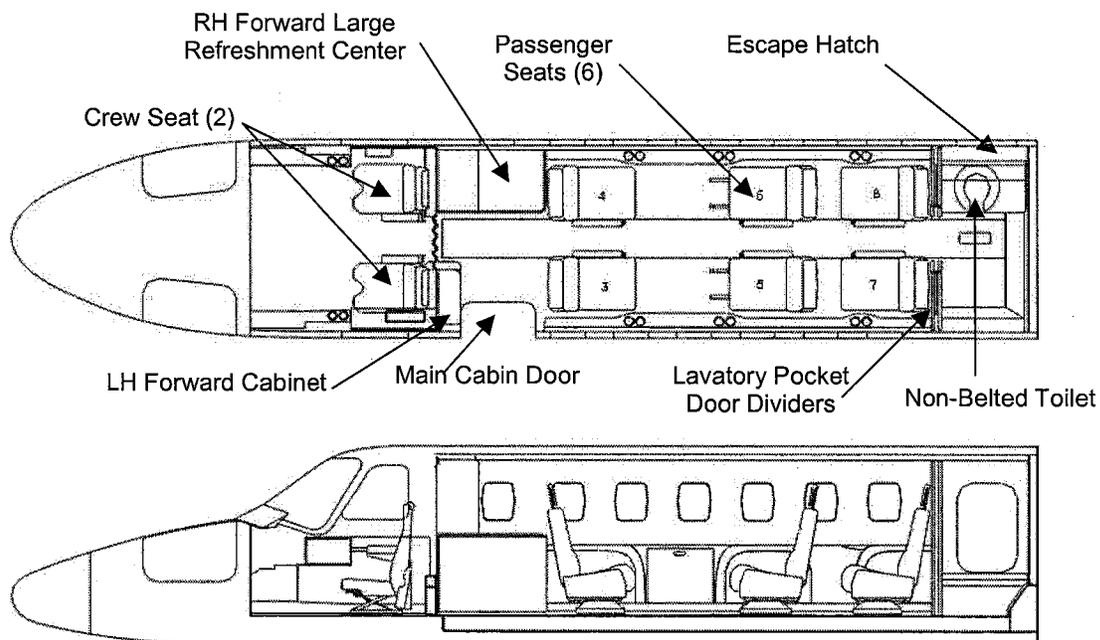


Figure 1
Standard Floorplan

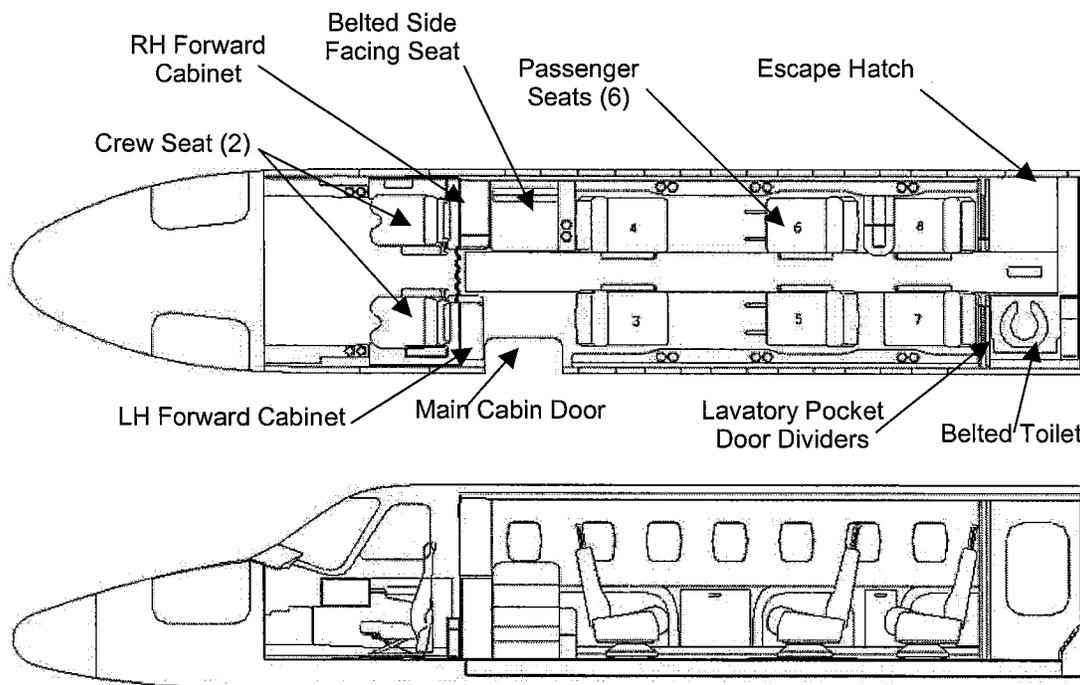


Figure 2
Optional Floorplan

DISCUSSION

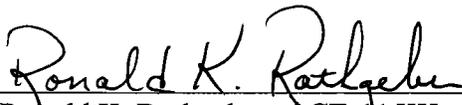
Amendment 23-34 added commuter category rules to the CFR certification requirements. This was also the amendment level at which 14 CFR 23.853(d) was added. The Preamble for this amendment can be found in the Federal Register, November 15, 1983 (Volume 48, Number 221), Docket No. 23516; Notice No. 83-17. Within the Preamble, the basis for the commuter category was that “the level of safety established by the proposed airworthiness standards for the commuter category airplane are considered, to the maximum feasible extent, equivalent to those provided by the airworthiness standards for larger airplanes used in air transportation.” Amendment 23-34 became effective February 17, 1987. At that time, 14 CFR Part 25 for transport category aircraft had the requirement that lavatories must have “No Smoking” or “No Smoking in Lavatory” placards located conspicuously on each side of the lavatory entry door. The placards must have red letters at least ½ inch high on a white background at least 1 inch high. This requirement was first added to 14 CFR Part 25.853 at amendment 25-51, effective March 6, 1980. This was therefore the basis for establishing the commuter category requirements for 14 CFR Part 23 during the 1980’s. However, at amendment 25-72, the “No Smoking in Lavatory” placard requirements for transport category aircraft were moved from 14 CFR Part 25.853 to 14 CFR Part 25.791, effective August 20, 1990. The requirement that smoking was not allowed in the lavatory was retained in 14 CFR Part 25.853. When the requirements for the placard were moved, the size and color requirements were removed and only required that the “No Smoking” or “No Smoking in Lavatory” placard be conspicuously located on each side of the lavatory entry door. These are the requirements, to this day, for transport category aircraft. There is no discussion in the Preamble to amendment 25-72 why the color and size requirements were removed. It is apparent that the size and color were not considered a safety issue, as

long as each side of the lavatory entry doors were conspicuously marked with "No Smoking" or "No Smoking in Lavatory" placards.

CONCLUSION:

Cessna believes that the Model 525B should not be required to have such a large sign on this size of aircraft, not required by similar aircraft, such as the Model 525 and 525A, certified under the normal category. In addition, the Model 525B should not be required to have stricter requirements than those imposed on transport category aircraft today. Cessna would agree to install "No Smoking" or "No Smoking in Lavatory" placards and conspicuously locate them on each side of the lavatory entry door, consistent with current Part 25 transport category aircraft.

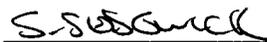
ACO Recommendation: The Wichita ACO recommends that an ELOS be granted for 14 CFR Part 23.853(d)(2). The FAA notes that Cessna's request for equivalent level of safety is based on complying with the current requirements of 14 CFR Part 25.791(d). Within the Preamble of 14 CFR Part 23.853(d)(2), the basis for the commuter category was that "the level of safety established by the proposed airworthiness standards for the commuter category airplane are considered, to the maximum feasible extent, equivalent to those provided by the airworthiness standards for larger airplanes used in air transportation."


 Ronald K. Rathgeber, ACE-115W
 Manager, Wichita Aircraft Certification Office

April 27, 2004

Concurrence:




 Manager, Standards Office, ACE-110

May 6, 2004
 Date


 Manager, Small Airplane Directorate, ACE-100

May 14, 2004
 Date

see