

Proposed Special Condition for Installation of suite type seating for two passengers

Applicable to Airbus A-380

Issue 2

Introductory note:

The hereby presented Special Condition to the EASA Certification Basis shall be subject to public consultation, in accordance with EASA Management Board decision 12/2007 dated 11 September 2007, Article 3 (2.) of which states:

"2. Deviations from the applicable airworthiness codes, environmental protection certification specifications and/or acceptable means of compliance with Part 21, as well as important special conditions and equivalent safety findings, shall be submitted to the panel of experts and be subject to a public consultation of at least 3 weeks, except if they have been previously agreed and published in the Official Publication of the Agency. The final decision shall be published in the Official Publication of the Agency."

Statement of issue

Airbus is applying for new interior design on A380 for a new customer.

The proposed interior design incorporates "classical" mini-suites that are covered by the Special Conditions developed in CRI D-41 "Installation of suite type seating".

For this new customer layout, one of the "mini suites" should be allowed for occupancy by two passengers.

This is in contradiction to the limitation introduced through CRI D-41 where only single occupancy is allowed in each of the mini suites in order to limit the effects on passengers that could be trapped inside or hindered during an evacuation event, and where the limitation of the maximum number of "mini suites" per cabin zone to 25% of the max seating capacity of the same zone was introduced to minimize the risk and to reduce the cabin crew work load in such cabins in emergency situations.

Airbus A380 – Special Condition D-54

- Installation of suite type seating for two passengers -

Occupancy of a mini-suite by two passengers can be acceptable provided there is an obvious escape path, from the mini-suite to the nearest main aisle, not involving the negotiation of any door(s).

This escape path, and the associated mini-suite, must satisfy the attached Special Condition criteria.

Special Condition

- 1) CRI D-41 will apply to a double occupancy mini-suite, with the exception of paragraph 1 of the associated Special Condition. All other references to doors in CRI D-41 are to be read as "if fitted".

Note :

the Special Condition text introduced by CRI D-41, having already been consulted, is annexed for convenience, and the current consultation should be limited to the new criteria introduced by SC D-54.

- 2) An escape path to the nearest main aisle, not involving the negotiation of any door(s), shall be provided meeting the dimensional requirements of CS25.815 that corresponds to the occupant count of the suite.

The escape path may be achieved by not incorporating any door(s) in the mini-suite design or by providing a secondary escape path.

- 3) Unless there is for each escape path a short and direct access to the nearest main aisle, exit signs meeting CS 25.811(d)(3) and low level floor path lighting meeting CS 25.812(e) are required.
- 4) It must be ensured that the signs, markings, and lighting at the access into the suite area are designed so as to minimise the risk of persons mistakenly entering the suite area from the main aisle during an emergency evacuation.

Annex

(For Information)

A380 Special Condition D-41 – Installation of suite type seating

- 1) Only single occupancy of the Mini-suite is allowed during taxi, take-off and landing.
- 2) Mini-suite entrance can only provide access to the specific mini-suite.
- 3) Mini-suites cannot provide an egress path for evacuation other than the path out of the mini-suite for its single occupant
- 4) Installation of the mini-suites must not introduce any additional obstructions or diversions to evacuating passengers, even from other parts of the cabin
- 5) The design of the doors and surrounding "furniture" above the cabin floor in the aisles must be such that each passenger's actions and demeanour can be readily observed by cabin crew members with stature as low as the 5th percentile female, when walking along the aisle.
- 6) The mini-suite doors must be open during taxi, take-off and landing
- 7) The hold open retention mechanism for mini-suite doors must hold the doors open under JAR 25.561(b) emergency landing conditions
- 8) There must be a secondary, backup hold open retention mechanism for the mini-suite doors that can be used to "lock" the doors in the open position if there is an electrical or mechanical failure of the primary retention mechanism. The secondary retention mechanism must hold the doors open under JAR 25.561(b) emergency landing conditions
- 9) There must be a means by which cabin crew can readily check, that all mini-suite doors are in the fully open and in the latched condition.
- 10) There must be means by which cabin crew can prevent the seated mini-suite occupant from operating the doors. This means is envisaged to be used in particular to secure the TTOL phases of the flight.
- 11) Appropriate placards, or other equivalent means must be provided to ensure the mini-suite occupants know that the doors must be in the open position for taxi, take-off and landing
- 12) Training and operating instruction materials regarding the proper configuration of the mini-suite doors for taxi, take-off and landing must be provided to the operator for incorporation into their cabin crew training programs and associated operational manuals.

- 13) The mini-suite must have an Emergency Passage Feature (EPF) to allow for evacuation of the mini-suite occupant in the event the door closes and becomes jammed during an emergency landing. This EPF may be through frangibility and /or a removable of emergency panel, or equivalent (such as dual sliding doors). The EPF must be easily broken /removed by the occupant of the mini-suite when the door becomes jammed. Trapping of any occupant is not acceptable and in no case shall the occupant using the EPF have to rely on another occupant to assist in passage. In addition a second path out of the mini suite must be provided. All ways to exit the mini suite in case of emergency must be demonstrated to work for a 5th percentile female and a 95th percentile male.
- 14) The height of the mini suite walls and doors must be such that a 95th percentile male can fit between them and the airplanes interior furnishing.
- 15) No mechanism to latch the doors together in the closed position is allowed
- 16) The mini-suite doors must be openable from the inside or outside with 25 pounds force or less regardless of power failure conditions
- 17) If the mini-suite doors are electrically powered the doors must remained "locked" in the open position after power loss to the mini-suite
- 18) Mini-suites installation must maintain the main, cross aisles and passage ways
- 19) Mini-suite doors must not impede main aisle or cross aisle egress paths in the open ,closed or translating position
- 20) The mini-suite doors must be openable even with a crowded aisle
- 21) The number of individual passenger seat modules shall not exceed 25% of the max. seating capacity of the specific cabin zone according to the A380 Type Certification Layout
- 22) For compliance to JAR 25.785(h)(2) the length of each main aisle adjacent to the seat modules must be visible, at least such that the main aisle part remaining unobservable does not exceed 50% of the total main aisle width at the end of this cabin section (entrance area of last seat module), and
- 23) In case the main aisle width cannot be observed to at least 50% at the end of the cabin section (entrance area of last seat module), it is equivalent to have at least 80% of the seat module entrance areas in direct view from designated direct view seats, under the conditions of CRI D-9. An entrance area is considered visible, if a person standing in the main aisle, directly at the seat module entrance is observable. In line with the current assist space dimension a body depth of 12 inches is therefore assumed.
- 24) If special cabin areas are located in proximity to stairs, e.g. at the forward Upper Deck, the access to the stairs must be in view of the responsible cabin crewmember