



COMMENT RESPONSE DOCUMENT

EASA CRD of Special Condition D-08 – Cabin Attendant Seat mounted on movable interior monument

Applicable to A330 / A340

[Published on 09 April 2018 and officially closed for comments on 30 April 2018]

Commenter 1: The Boeing Company – T.L. McVenes / Director of System Safety & Regulatory Affairs / 30 April 2018

Comment # 1

THE PROPOSED TEXT STATES:

“1. The proposed installation of a cabin crew seat that can be occupied during all phases of flight on a movable part of an interior monument (e.g. a hinged door) must be capable to carry flight, ground and emergency landing condition loads in accordance with 25.301, 25.561, 25.562, including the special factors of 25.619 (e.g. fitting factors).”

REQUESTED CHANGE:

“1. The proposed installation of a cabin crew seat that can be occupied during all phases of flight on a movable part of an interior monument (e.g. a hinged door) must be capable to carry flight, ground and emergency landing condition loads in accordance with 25.301, 25.561, 25.562, including **the fitting** and special factors of 25.619, **25.625(d), 25.785(f)(3)** ~~(e.g. fitting factors)~~. **The seat attachment to the movable part, the movable part and its attachments to the interior monument, must be capable of carrying the emergency landing condition loads in accordance with 25.561 & 25.562.**”

JUSTIFICATION:

The movable part of the interior monument is not an integral part of the monument structure. The movable part should be considered part of the entire seat system (seat, moveable part, non-moveable part) with regard to seat dynamic test requirements and substantiated accordingly.

EASA response: PARTIALLY AGREED

First sentence of requested change: CS 25.619 already refers to the special factors mentioned in CS 25.621 thru CS 25.625, so there is no need to mention CS 25.625(d) and CS 25.783(f)(3) specifically, as the factors contained in these requirements are already included by reference to CS 25.619.

No change is made to the relevant section of the SC.



Second sentence of requested change: EASA concurs with the proposed text.

The text of the Final SC in response to this comment is modified as follows:

1. The proposed installation of a cabin crew seat that can be occupied during all phases of flight on a movable part of an interior monument (e.g. a hinged door) must be capable to carry flight, ground and emergency landing condition loads in accordance with 25.301, 25.561, 25.562, including the special factors of 25.619 (e.g. fitting factors). **The seat attachment to the movable part, the movable part and its attachments to the interior monument, must be capable of carrying the emergency landing condition loads in accordance with 25.561 and 25.562**

Comment # 2

THE PROPOSED TEXT STATES:

“2. The design must ensure that the seat can only be used if the movable part of a cabin interior monument (lavatory door) is securely locked in the closed position and with all necessary locks engaged to carry the emergency landing loads as well as flight and ground loads. When applying these loads, the effect of deformation of the cabin interior monument as well as the movable part to which the seat is attached to, needs to be considered, to prevent any unlocking.”

REQUESTED CHANGE:

“2. The design must ensure that the seat can only be used if the movable part of a cabin interior monument (lavatory door) is **positively secured** ~~securely locked~~ in the closed position and with all necessary **restraint devices** ~~locks~~ engaged to carry the emergency landing loads as well as flight and ground loads. When applying these loads, the effect of deformation of the cabin interior monument as well as the movable part to which the seat is attached to, needs to be considered, to prevent any **disengagement of restraint devices** ~~unlocking~~.”

JUSTIFICATION:

To clarify that the intent to prevent unlocking is not in the sense ‘to have a key to release’ but to realize all defined restraints are engaged to react to the required loads.

EASA response: PARTIALLY AGREED

In order to clarify the text and the intent of the requirement, the SC is amended as follows to introduce a common terminology.

The text of the Final SC in response to this comment is modified as follows:



2. The design must ensure that the seat can only be used if the movable part of a cabin interior monument (lavatory door) is securely **closed, latched and locked** in the closed position and with all necessary **latches and** locks engaged to carry the emergency landing loads as well as flight and ground loads. When applying these loads, the effect of deformation of the cabin interior monument as well as the movable part to which the seat is attached to, needs to be considered, to prevent any **unlatching and/or** unlocking.

Comment # 3

THE PROPOSED TEXT STATES:

“5. Potential deterioration of moving parts due to wear and tear (25.561(c)(2)) needs to be addressed accordingly. Therefore, in addition to the application of the 1.33 wear and tear factor the mechanism should be cycle tested according to the use case of the movable part of the interior monument. In addition, appropriate Instructions for Continued Airworthiness shall be defined.”

REQUESTED CHANGE:

“5. Potential deterioration of moving parts due to wear and tear (~~25.561(c)(2)~~) needs to be addressed. ~~accordingly. Therefore, in addition to the application of the 1.33 wear and tear factor the~~ **The** mechanism ~~should~~ **shall** be cycle tested according to the use case of the movable part of the interior monument **prior to structural substantiation**. In addition, appropriate Instructions for Continued Airworthiness shall be defined.”

JUSTIFICATION:

The rule 25.561(c)(2) is intended to address structural items that are subject to wear as a result of interior reconfiguration. A lavatory door will be subject to repetitive use well beyond that of occasional reconfigurations of an interior. As such, the 1.33 fitting factor may not adequately address the wear that the lavatory door mechanism could see. Cycle testing the movable parts prior to structural substantiation of these parts would ensure that wear has been addressed regardless of the amount of wear and deterioration the parts would be exposed to.

EASA response: DISAGREED

EASA understands the Boeing comment as to require only cycle testing and not apply the 1.33 wear and tear factor. In the consulted text it is proposed to consider the 1.33 wear and tear factor as well as to perform cycle testing to determine the resulting wear and tear (deterioration), and to consider both in the structural substantiation. As the seat installation on the lavatory door is more critical, EASA is of the position that the original text provides an adequate level of safety.

No changes have been made to the Final SC in response to this comment.

