


EASA	COMMENT RESPONSE DOCUMENT
	SC on Medical Evacuation configuration Applicable to Large Aircraft category Issue 2

General remark regarding CRD Issue 2:

Issue 3 of the Special Condition on Medical Evacuation has introduced a note related to the implementation timeframe for 25.853(c). The second SC public consultation was intended to limit the eventual comments against this addendum. However, the new comments received were, mainly, in reference to replies already provided at the time of initial consultation. Then, those comments (under Commenters 3 and 4) are addressed through this CRD Issue 2, following the initial ones already answered at the time of the CRD issue 1.

Commenter 1 : Lufthansa Technik

Comment # 1 –

The SC does not adequately consider or explicitly excludes passenger cabin configurations that include both, normal passenger seats and also medical evacuation equipment like stretchers or patient transport units.

Comment:

Item "f" of the SC should/could be re-worded as "The conditions of limitation for transportation of fare paying passengers and the related operation has to be defined clearly due to concurrent transportation of incapacitated and fare paying passengers in the same transport category airplane."

EASA response:

The proposed Special Conditions are applicable to Large Aeroplanes configurations to be used for medical evacuation. Any configuration that is fully compliant with part 25 is of course entitled to commercial operation, i.e. when compliance with CS-25 can be demonstrated, subject Special Conditions do not apply.

Commenter 2 : AustroControl

Comment # 1 –

Title of the Special Condition

Comment:

The wording "Medical evacuation" should be explained -otherwise could be brought into conjunction with "our evacuation" according CS 25.803.

More generally, This should be clearly defined if this SC applies only to configurations with several stretchers installed or also applicable for 'ambulance' versions with e.g. only one stretcher installed.

EASA response:

EASA considers that both the title and the statement of issue of the CRI clarify that the Special Conditions are not applicable to conventional airline configurations used for commercial operation and fitted with a very low number of stretchers.

Comment # 2 – Statement of Issue

Regarding the non-compliance(s) with 25.785(j) that medical configurations can introduce, it is not always said that these configurations are not compliant with these regulations.

Comment:

Wording should be changed.

EASA response:

EASA disagrees with the commenter.

Statement of issue says "in general" and the SC is relieving. Consequently EASA sees no need to change a relieving requirement which may or may not materialize, despite a high probability.

Comment # 3 – Special Condition

In case of low number of stretchers, the assumption that medical assistants could assist in case of the evacuation.

Comment:

Austrocontrol always asked for the adequate numbers of able bodied persons to accomplish the evacuation of stretchers, this had been part also in the AFM Supplement. Although an operational issue this should be part of the SC.

EASA response:

EASA agrees with the intent of the comment.

It must be noted that Special Condition a) attempts to achieve exactly the proposed objective without suggesting specific solutions: all practicable design precautions and operational procedures must be developed to facilitate evacuation without compromising the egress of cabin attendants and other passengers.

Precautions may include features such as location relative to normal passenger seating and emergency exits, easy release of stretchers from their attachments to the a/c to enable patients to be stretcher borne to emergency exits, easily accessed patient restraint buckles to alternatively allow removal and direct carrying of patients, associated training/briefing procedures for attendants, etc...

Proposed design precautions and procedures will be evaluated by the Agency for acceptability.

An entry shall be made in an AFM supplement to define the procedure to be followed for the evacuation of the occupants of the stretchers.

Comment # 4 – Special Condition

Recommendation of wording change:

Comment:

AustroControl would recommend to change wording through the sentence "*It can only be **concluded that, in certain cases, stretcher born occupants will have very little chance of rapid evacuation.***", by for instance "*presumed that evacuation of stretchers will take longer than Evacuation of ambulant persons*".

EASA response:

Partially accepted.

Wording is changed as follows: " it can only be concluded that, in certain cases, evacuation of stretcher borne occupants will be significantly slower than that of other cabin occupants.",

Comment # 5 – Special Condition

Recommendation of wording change under a).

Comment:

AustroControl would recommend to change wording through the sentence "*In regards to stretcher occupants, all practicable design precautions and operational procedures must be developed to facilitate evacuation without compromising **the egress of cabin attendants and other passengers.***", by for instance "egress of occupants".

EASA response:

EASA agrees with the proposed wording change.

Comment # 6 – Special Condition

Recommendation of wording change under a).

Comment:

AustroControl would recommend to change wording through the sentence "*In regards to stretcher occupants, all practicable design precautions and operational procedures must be developed to facilitate evacuation without compromising **the egress of cabin attendants and other passengers.***", by for instance "egress of occupants".

EASA response:

EASA agrees with the proposed wording change.

Comment # 7 – Special Condition

Observation under b).

Comment:

Within the sentence *"In areas where closely spaced firm handholds cannot be easily provided as per 25.785(j), (e.g. along aisle portions where stretchers are installed) all practicable efforts must be taken to provide **useable handholds** to enable passengers to reach their designated seats."*, .AustroControl highlights that handholds are not only for passengers.

EASA response:

EASA agrees with the proposed wording change.

*The sentence will be changed as follows: "In areas where closely spaced firm handholds cannot be easily provided as per 25.785(j), (e.g. along aisle portions where stretchers are installed) all practicable efforts must be taken to provide **useable handholds** to enable cabin occupants to reach their designated seats".*

Comment # 8 – Special Condition

Notes under d).

Comment:

AustroControl highlights that not only the distribution but also the donning is questionable and should be reflected in the procedures. In addition, floatation means may not be adequate for stretcher occupants,(eg thinking on seat cushions) then life preservers should be required.

EASA response:

EASA agrees with the proposed wording change.

Special Condition d) will be revised to require that, also for aeroplanes not certificated for ditching under 25.801, there must be a life preserver for each stretcher occupant.

Comment # 9 – Special Condition

Note under e)2).

Comment:

AustroControl would recommend avoiding the term "safest alternative" which sounds too vague. On the other hand "**should** be such that they have to be within easy reach of each occupant." is contradictory to "safest alternative", then AustroControl recommends a rewording and to use 'to have to' instead.

(So what would be the required design if you have e.g. three stretcher one above the other?)

EASA response:

EASA disagrees with the proposed wording change.

Considering the question in bracket, the SC is established to propose a generic approach on the Medical Evacuation matter, and do not foreseen to address specific design. This has to be assessed on a case by case basis.

Comment # 10 – Conclusion

A lot of existing STCs are certified in compliance with TGM/25/12.

TGM/25/12 has been written under the assumption that one to two stretchers were taking into account and not considering a cabin full of stretchers, whereas the SC is requiring the compliance with Appendix F JAR/CS 25 and 25.853(c).

Comment:

If it is foreseen that for 1 to 2 stretchers, this fire blocking SC requirement should be applicable?

EASA response:

EASA current policy is to require compliance with CS-25 App. F part II for the stretcher mattress, regardless of the number of stretchers installed.

Commenter 3 : Bucher Leichtbau AG

Comment # 1 –

The general requirement for the exclusion of fare-paying passengers, regardless of the number of stretchers installed in the particular aircraft is an unrealistic restriction from our point of view.

[..]

f) As well as the entries discussed above, a supplement to the Aeroplane Flight Manual shall be developed containing a limitation stating

*that fare-paying passengers cannot be transported on the aeroplane.
In addition, a specific limitation must be indicated in the AFM to prohibit operation of the aeroplane with fare-paying passengers.
[..]*

Comment:

If as an example, one (1) stretcher is installed in an A380, the above stated requirement would mean that the complete aircraft may not be used for other regular paying passengers, except perhaps for healthcare professionals or escorts. That would mean the end of medical transport activities during regular airline service, since once a medical stretcher is occupied in the cabin, the aircraft could not be used in regular service at the same time.

However, for a certain ratio regular passenger / incapacitated passenger, or for a significant number of incapacitated passengers compared to the seating capacity of the aircraft, the mentioned requirement could be practical and would increase safety. And it is absolute clear that in case of pure ambulance service missions, as example ADAC recovery service with Dornier 328, no regular passenger transport can be conducted at the same time. No doubt, a restriction makes sense and adds additional safety in case of the last mentioned scenario.

A general restriction as proposed in the special condition would be just a burden for operators offering medical transport capacity as an additional service to the regular flight operations.

If the restriction in the special condition comes into force as proposed in D-xx (Issue 3), medical transports as an additional service to regular flight operations would come to an end.

EASA response:

Comment noted. Similar comments have been previously made; see EASA response to Commenter 1 Comment #1 and Commenter 2, Comment #1

Comment # 2 –

[..]

EASA, considering the cushion function of the stretcher mattress, requires the stretcher mattress to comply also with CS 25.853(c), and therefore successfully pass flammability testing of Part II of Appendix F on JAR 25.1

[..]

Comment:

The initial intention and the objective of the Federal Aviation Administration (FAA) Amendments 25-59, 29-23 and 121-184 becoming effective November 26 1984, was to improve cabin safety and occupant survivability in aircraft accidents. And it is incontestable that the involvement of a large amount of foam cushion material in the aircraft is the major factor in a cabin fire, and a source of smoke and toxic

gas emissions. Nevertheless, it must be taken into account that the number of stretchers would be rather small (in normal cases) compared to the number of regular seats installed in an aircraft. Furthermore, the stretchers are (in normal cases) not part of the cabin installation if not occupied. The percentage of foam cushion material added by stretcher installations is under normal circumstances rather small compared to other material also prone to generating smoke and toxic gas emissions.
It should be carefully evaluated if a flammability test as per CS 25.853 Appendix F Part I (12 and 60 second vertical Bunsen burner tests) would be sufficient in cases where a small number of stretcher installations are temporarily part of the cabin installations.

EASA response:

Comment noted. Similar comments have been previously made; see EASA response to Commenter 2, Comment #10

Comment # 3 –

[..]

Note: Regarding the compliance with 25.853(c), and in anticipation of EASA rulemaking activities on flammability requirements, EASA reiterates the policy to require CS 25.853(c), and therefore successfully pass flammability testing of Part II of Appendix F on JAR/CS 25 for stretcher mattresses. Since EASA was made aware that existing designs for stretcher mattresses vary widely in terms of compliance with this requirement, EASA can agree to an implementation timeframe of 18 months counted from the end of the Special Condition Issue 3 final publication date.

[..]

Comment:

We assume that the implementation timeframe of 18 month means that all existing certified products in service must be upgraded and recertified by Service Bulletins within 18 month. That would mean in the broadest sense: Replacement of the mattress within 18 month. The economic impact compared with the benefit and added safety is out of all proportion, and is an additional burden for the industry. Even in case of the passenger seats manufactured by Koito Industries (EASA AD No.: 2011–0098) where falsification of static, dynamic and flammability testing, as well as uncontrolled changes was involved, a grace period of 24month or 36 month was granted.
If I compare the proposed special condition for stretcher installations and the whole story from Koito Industries seats causing an AD, the proposed implementation timeframe of 18 month is an exaggerated, not to say unnecessary measure.

EASA response:

Comment noted. Per part 21 definition, a Special Condition applies once being added to the Cert Basis of a product or change to a product. At this time EASA has not defined retroactive requirements concerning compliance with 25.853(c),

Commenter 4 : CAA UK

Comment # 1 – Medical evacuation configuration – First paragraph

[..]

Although compliance with 25.803 in the normal case assumes all passengers are fully able to themselves evacuate the cabin such an assumption has questionable validity in the case of the subject design.

[..]

Comment:

This sentence is not correct. In many flights there are passengers on board who are not able to evacuate themselves without assistance but the aircraft is not deemed to be non-compliant for these flights. The issue here is the 'higher than normally tolerated' number of non-ambulant passengers which results in a variation from the intent of the rule.

Proposed Text: *'Compliance with 25.803 is demonstrated by test or analysis in which all the occupants are fully able to evacuate the aircraft themselves with no assistance. The presence of a relatively high number of non-ambulant occupants constitutes a significant variation from the intent of the rule.'*

EASA response:

Comment noted. The existing wording does not refer to operation of the aircraft, but to the test environment related to 25.803. Although the wording proposed might result in a slight improvement, EASA does not believe it changes the overall intent of the SC.

Comment # 2 – Medical evacuation configuration – Second paragraph

[..]

Designs incorporating a low number of stretchers into airliner cabins have been approved in the past on the assumption that able bodies persons will be requested to assist in the evacuation of the stretcher occupants and that in doing so the risk that they will endanger either themselves or other occupants is limited.

[..]

Comment:

This may be overstating the philosophy. The stretchers and occupants may have been accepted simply on the basis that the number of flights with them was limited and the risk was low on that basis. Although the stretcher occupant may be able to be evacuated in an accident, no account of this may have been taken when assessing the risk, including to the person assisting.

Proposed Text : *'Designs incorporating a low number of stretchers into airliner cabins are approved on the basis that the number of flights and therefore the risk is limited.'*

In the same paragraph suggest omitting *'and the correspondingly relatively low number of seated occupants'*. The number of seated occupants will depend primarily on the size of the aircraft and the number of persons in the aircraft which is not dependent on design.

In the same paragraph suggest replacing *'significantly slower'* with *'less successful'*. Although it is of course possible that in some accidents time may be available to save some stretcher occupants, the main safety risk is that some of them will not survive

EASA response:

Comment noted. Similar comments have been previously made; see EASA response to Commenter 1 Comment #1 and Commenter 2, Comment #1 through #4. Although the wording proposed might result in a slight improvement, EASA does not believe it changes the overall intent of the SC.

Comment # 3 – Medical evacuation configuration – Fifth paragraph

[..]

After consideration of all the above, EASA agrees that practicable design solutions which would remove the above safety concerns are limited. Reducing the maximum number of stretchers allowed on the aircraft would presumably result in more flights with an increase of the probability of an emergency evacuation of the aeroplane being required.

[..]

Comment:

It is agreed that the number of stretchers on any one aircraft should not be unreasonably limited but speculating as to probability of an accident for such a small number of flights is not valid. It is proposed that this paragraph is omitted.

EASA response:

Comment noted. EASA is not able to follow the commenter's argumentation. EASA maintains the opinion that the probability of an emergency evacuation is related to the number of flights performed.

Comment # 4 – Medical evacuation configuration – Sub paragraph c)

[..]

c) To the extent practicable, without compromising proximity to a required floor level emergency exit, flight attendant seats must be located to face the cabin area for which the flight attendant is responsible.

[..]

Comment:

It does not appear justifiable that aircraft in service with no direct view compliance, where the cabin attendants may not be facing into the cabin, should not be allowed to perform the medical evacuation function without changing the position of the cabin crew seats. Aircraft that do comply will not require to be changed in any case. It is not considered that this function is sufficiently different from the normal passenger role to require any additional direct view compliance. It is therefore proposed that reference to cabin crew direct view be omitted from this Special Condition.

EASA response:

EASA disagrees with the commenter. Sub paragraph C) substitutes paragraph 25.785(h). The statement "to the extent practicable", basically addresses cases in which changes to the flight attendant seats are performed as part of the design definition for Medical evacuation. It also addresses cases in which cabin attendant seats are not relocated but the cabin attendant direct view is obstructed by interior components part of the definition for Medical Evacuation.

Comment # 5 – Medical evacuation configuration – Sub paragraph f)

[..]

As well as the entries discussed above, a supplement to the Aeroplane Flight Manual shall be developed containing a limitation stating that fare-paying passengers cannot be transported on the aeroplane.

[..]

Comment:

It is not clear whether 'fare paying passenger' is a recognised or adequate definition for persons intended to be excluded from such flights. Although at an airworthiness level the safety standard afforded to the occupants may be adversely affected by variations in compliance, the passengers' commercial or legal status is an operational issue.

EASA response:

Comment noted. Similar comments have been previously made; see EASA response to Commenter 1 Comment #1