



COMMENT RESPONSE DOCUMENT

EASA SC-VLA.div01- is.1 for CS-VLA Aeroplanes with Maximum Take Off Mass of more than 750 kg
[Published on the 21-03-2018 and officially closed for comments on the 11-04-2018]

Commenter 1 : Mr. Giuseppe Paduano – date 26-03-2018

Comment # 1

Paragraph No: SC-CVLA.03 (a)

- **Comment:** Why is strictly necessary to have a 4 points restraint? 3 points are commonly accepted for CS 23 applications, is this due to the fact EASA is requesting a single forward static test at 18g, instead of the usual dynamic tests requested by the 562?

Justification: --

Proposed Text (if applicable):

EASA response: noted.

The request of a 4-point (minimum) harness is compensating for the missing dynamic test requirement. A 4-point harness system would limit the body movement more than a 3-point safety belt system (car-type).

For clarification:

- *a 4-point harness is consisting of two lap belt straps and two shoulder straps. The shoulder straps may be attached to one point to the structure;*
- *a 3-point harness is consisting of two lap belt straps and one shoulder strap.*

The clarification will be added to the Special Condition as AMC to SC-CVLA.03 (a).

Comment # 2**Paragraph No:** SC-CVLA.03 (e)

- **Comment:** It seems a little disproportionate the fact that for 100 kg of MTOM in excess, this requirement increases the forward loads for the items in cabin from 9g to 18g (and from 1.5g sideward to 4.5g). I believe it should be noted that such requirement is applicable to CS 23 aircraft which could put in play 8618 kg MTOM, up to 19 passengers and have large cabins. I believe it could be better to apply a step approach, like for the new CS 23, considering the maximum number of occupants for a CS VLA of 2.

In addition, I would suggest, if possible, the implementation of a rational looking possibly also at the context for this MTOM exceedance, i.e. if the MTOM is increased to allow a higher baggage loading or fuel embarking, then related requirements should be taken even more into account for the crashworthiness.

Indeed, looking at the example of the baggage increase, the applicable CS VLA requirements recall the loads applied i.a.w. CS VLA.561 (b)(2) (9g forward etc.) which are lower than the ones for the items in cabin, even if the baggage is not separated from the cabin and it is the real impact of the change.

Justification: -

Proposed Text (if applicable):

EASA response: Partially accepted.

The increase of the static load to 18 g for the items in cabin is linked to the requirement in SC-CVLA.03 (d) for the seat system which is introduced to compensate for the missing dynamic test requirement. This is in line with the current discussion with the ASTM standards for occupant protection (means of compliance to CS 23 amdt 5 / FAR 23 amdt 64).

EASA will amend the Special Condition considering the baggage compartment requirements by introducing the following:

Instead of CS-VLA.787 (e) the following applies:

If there is no structure between baggage and occupant compartments the baggage items located behind the occupants and those which might become a hazard in a crash must be secured for 1.33 x 18 g.