

Comment				Comment summary	Suggested resolution	Comment is an observation (suggestion)	Comment is substantive (objection)	EASA comment disposition	EASA response
NR	Author	Section, table, figure	Page						
1	ANAC	3.1 3rd paragraph	5	In the requirement CS 25.813, 25 inches are converted in 64 cm. In the proposed CM, the same measure is referred as 63 cm. If considered adequate, please harmonize the values or improve the text.		Yes	No	Accepted	The CM has been revised accordingly.
2	Boeing Commercial Airplanes	3.1	5	<p><b>THE PROPOSED TEXT STATES:</b></p> <p>“... For the measurement of the aisle width, all possible stable position of moveable items (e.g. armrests, armcaps, deployable video monitors, tray tables, etc.) should be evaluated. Any non-self-supporting position does not need to be considered. For example, armrest covers which need to be lifted only during deployment/stowage of in-armrest table and which are then spring loaded closed do not need to be considered.”</p>	<p><b>REQUESTED CHANGE:</b> We request to edit the proposed text as follows:</p> <p>“... For the measurement of the aisle width, all possible stable position of moveable items (e.g. armrests, armcaps, deployable video monitors, tray tables, etc.) should be evaluated. Any non-self-supporting position does not need to be considered. For example, armrest covers which need to be lifted only during deployment/stowage of in-armrest table and which <b>do not have a detent or latch holding them in the open position</b> <del>are then spring loaded closed</del> do not need to be considered.”</p> <p><b>JUSTIFICATION:</b> Adding a spring to close the armcap could become more of a hindrance to overall safety and compliance than allowing for gravity or a sweep motion to close the armcap. As long as the armcap is not held up by a detent or latch, it will return to the closed position via gravity or a gentle sweep when moving up/down the aisle and not encroach into the aisle (as is common practice in current seat design).</p>	Yes	Yes	Not Accepted	The intent of the CM is to provide allowance to protrude into the minimum aisle width envelope required by CS 25.815 for limited seat components, i.e. tray tables and video systems. EASA considers that armcaps may be designed to be closed by spring loading, or, if they are not, they should be relocated to deploy outside the minimum aisle width envelope required by CS 25.815.
3	Boeing Commercial Airplanes	Section 1.2 & Section 3.1 paragraph 1) b.	3 & 5	<p><b>THE PROPOSED TEXT STATES:</b></p> <p>“1.2 References CS 25.815 ... AMC 25.815... FAA AC 25-17A...”</p> <p>“3.1... 1) Encroachment into the dimensional aisle width limits of CS 25.815 is allowed: a. Only in phases of flight other than TT&amp;L. b. Only for deployable video monitors and tables that are not electrically operated, under the limitations specified below, in points 2 and 3 respectively. However, if deemed necessary, additional guidance specifically addressing deployable video monitors and tables that are electrically operated may be released by EASA in the future...”</p>	<p><b>REQUESTED CHANGE:</b> We request to edit the proposed text as follows:</p> <p>“1.2 References CS 25.815 ... AMC 25.815... FAA AC 25-17A... <b>ARP5526</b>”</p> <p>“3.1... 1) Encroachment into the dimensional aisle width limits of CS 25.815 is allowed: a. Only in phases of flight other than TT&amp;L. b. Only for deployable video monitors, <del>and</del> tables, <b>and</b> <b>handicapped armrests</b> that are not electrically operated, under the limitations specified below, in points 2, <del>and</del> 3, <b>and</b> 4 respectively. However, if deemed necessary, additional guidance specifically addressing deployable video monitors, <del>and</del> tables, <b>and</b> <b>handicapped armrests</b> that are electrically operated may be released by EASA in the future...”</p> <p><b>4) Handicapped armrests that encroach into the minimum aisle width envelope defined by CS 25.815 are allowed when following Aerospace Recommended Practice ARP5526 revision D section 3.6.”</b></p>	Yes	Yes	Accepted	The CM has been revised accordingly.

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					<b>JUSTIFICATION:</b> U.S. Department of Transportation (DOT) requires a certain percentage of aisle seats to include handicapped armrest. When the U.S. DOT rule was published the FAA provided guidance allowing encroachment of these handicapped armrest into the aisle width required by 14 CFR 25.815. These designs are common and used worldwide to support the disabled. As such, the FAA guidance was included in the Industry APR 5526 as a recommended practice and should continue to be supported by EASA.				
4	Boeing Commercial Airplanes	Section 3.1 paragraph 2) b. iii)	6	<b>THE PROPOSED TEXT STATES:</b> “2) Video monitors ... b. If a deployable video monitor encroaches into the minimum aisle width envelope required by CS 25.815, all the following conditions should be met: ... iii) In any position after deployment, regardless if stable or not, monitors installed on different seats should not come in contact with each other.”	<b>REQUESTED CHANGE:</b> “2) Video monitors ... b. If a deployable video monitor encroaches into the minimum aisle width envelope required by CS 25.815, all the following conditions should be met: ... iii) In any position after deployment, regardless if stable or not, monitors installed on different seats should not come in contact with each other <b>such that they could become an egress impediment.</b> ” <b>JUSTIFICATION:</b> Adjacent monitors that have a brushing contact that would not impede egress should be allowed. The idea is to avoid contact of monitors that impede egress (as they may not be able to be swept out of the aisle) as suggested in this certification memo.	Yes	Yes	Accepted	The CM has been revised accordingly.
5	Boeing Commercial Airplanes	Section 3.1 paragraph 3) a. i) and ii)	6	<b>THE PROPOSED TEXT STATES:</b> “3) Tables a. Encroachment into the minimum aisle width envelope defined by CS 25.815 is considered acceptable on all seat rows. If a table encroaches into the minimum aisle width envelope required by 25.815, all the following conditions should be met: i) The hinge mechanism of a deployed in-armrest table may have a length up to 102 mm (4”) and a height up to 51 mm (2”), measured from the top of the seat armrest, but should not protrude into the aisle beyond the armrest. ii) A table leaf with a thickness of maximum 25 mm (1”) may rest on an armrest but should not protrude into the aisle beyond the armrest.”	<b>REQUESTED CHANGE:</b> “3) Tables a. Encroachment into the minimum aisle width envelope defined by CS 25.815 is considered acceptable on all seat rows. If a table encroaches into the minimum aisle width envelope required by 25.815, all the following conditions should be met: i) The hinge mechanism of a deployed in-armrest table may have a length up to 102 mm (4”) and a height up to 51 mm (2”), measured from the top of the seat armrest, but should not protrude into the aisle beyond the <b>outside of the</b> armrest. ii) A table leaf with a thickness of maximum 25 mm (1”) may rest on an armrest but should not protrude into the aisle beyond the <b>outside of the</b> armrest.” <b>JUSTIFICATION:</b> The proposed changes are editorial to avoid confusion.	Yes	Yes	Accepted	The CM has been revised accordingly.

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6	Zodiac Seats	General		Scope of the Evaluation	The purpose of this Certification Memorandum is to provide specific guidance about methods of compliance with the requirements of CS 25.815 with respect to deployable items installed on seats and their surrounds that can temporarily encroach into aisle passageways.	Yes	No	Noted	The understanding of the commenter is correct.
7	Zodiac Seats		6 of 6	Who this certification memorandum affects  With respect to TSO and ETSO holders, specify that this is (or is not) outside of published limitations of the seat's (E)TSO. While installation limitations can be noted by the (E)TSO holder, surrounding interior components and their own features are not controlled by the (E)TSO holder.	In section 3.2:  Add: "Evaluations conducted per this memorandum may be reported by the (E)TSO holder and reported on the IIL. The IIL may allow the installer to verify compliance with the interior cabin requirements."	Yes	No	Not Accepted	The guidance of the CM is intended for use in seat installation projects. Consideration of the guidance CM in the context of ETSO projects is not required.
8	Zodiac Seats		3 of 6 and 5 of 6	Extension of the definition of "moveable items"  "Moveable items" addressed in this document is limited to video monitors and in-arm food tables as mentioned in section 3.1, 1), 2) and 3).  Many other items such as handicap armrests, corded devices, cocktail trays, hinged armcaps, seat belts are typically present and possibly temporary intrude in a restricted aisle space.  Occasionally, premium class cabins may also include additional moveable features other than monitors or tables that can be moved out of the way with the same criteria and therefore not affect the safety of operations in the same manner as tables and monitors.	3.1. 1) b. "Items that encroach into restricted aisle width space must be able to be easily moved out of the way per section 2) b. ii) below."  [Suggest mentioning that corded devices and handicap armrests have their own guidance for proper evaluation. – add to the background section]  Any feature that may temporarily encroach into an aisle must be easily moved out of the way with 10 lbs or less and no secondary action to remain out of the restricted area.	No	Yes	Not Accepted	The encroachment allowance given in the CM is limited to the seat components listed in section 3.1. Applicants may propose to EASA criteria that are different from the ones outlined in the CM and seek acceptance for those criteria from EASA on a case-by-case basis.  See also the answer to comment 2.
9	Zodiac Seats		1 of 6	Title  Suggest adding a reference to "Seats" in the title if indeed the scope is limited to seat features evaluation. While the second paragraph in the "purpose and scope" section specifies "applicable to moveable items of passenger seats", the purpose is to assist applicants seeking compliance to 25.815, and many other items in the interior can contribute to obstructing passageways when installed in conjunction with seats (galley, carts, etc...)	Revise Title to "Evaluation of aisle width with respect to seats installations"	Yes	No	Accepted	The CM has been revised accordingly.
10	Zodiac Seats		3 of 6 5 of 6	Front row Seat definition:  Specify whether this applies to all seats installed behind anything else than a seat; the current definition includes pod seats, i.e. where every row has a furniture installed in front of a passenger seat  For Premium class cabins, seats may be installed at a large pitch which will result in needing to have video monitors or in arm food tables at every row. Limiting the scope of the encroachment to front row seats only is impractical for this type of cabin configuration.	Add sketches of examples of what a front row seat is.    Because the criteria in the guidance provides a method to allow clearing any encroachment safely, it can be used for every item regardless of location in the required passageways.	No	Yes	Not Accepted	The CM includes a definition of front row seats. EASA finds that repetitive seat row installations may be designed so that seat movable items do not protrude into the minimum aisle width envelope required by CS 25.815 during all phases of flight.  See also the answers to comments 2 and 8.

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				Is this a narrowly scope document (just to address deployable items on front row seats)? Are we limiting the evaluation to front row seats (typically installed directly behind a bulkhead or class divider)					
11	Zodiac Seats		5 of 6	Remove the “one hand” instruction in section 3.1.2) b. ii)  To improve proper application and standardization throughout the industry.	<a href="#">Suggest harmonizing with AC25-562-1B for moving out of the way with 10 lbs (45N) or less.</a>  <a href="#">Wording adapted from AC25.562-1B (page 62 &amp; 94):</a>  “If a component partially deploys, a load of 10 pounds should be applied along the inertial load path of the test to evaluate the potential for full deployment. The load should then be removed. After the load has been removed, a determination will be made if “normal passenger movement” would move the component out of the way. Egress shall be evaluated after this consideration has been applied.”	No	Yes	Not Accepted	The suggested guidance of AC 25.562-1B is related to the assessment of the performance of seats in emergency landing conditions, while CS 25.815 applies to all phases of flight, and the CM specifically allows encroachment into the required minimum aisle width envelope in phases of flight other than Taxi, Take-off and Landing.
12	Zodiac Seats		6 of 6	Use of the word “intuitive”  The example of having to not activate a secondary feature is helpful, but the use of the word “intuitive” can be interpreted differently by different individuals. Specifying that the feature may be moved out of the aisle encroachment without the use of a secondary action may be more appropriate – keep the example.	<a href="#">Remove: “The application of the load should be intuitive.”</a>	No	Yes	Accepted	The CM has been revised accordingly.
13	Zodiac Seats		5 of 6	Limitation to non-electrically powered items  If the electrically operated feature has a manual override that meets the same criteria, would it not be acceptable?	<a href="#">Remove “That are not electrically operated” from section 3.1. 1) b. and, add:</a>  <a href="#">Electrically assisted features must be able to meet the same criteria as mechanically operated features. Including being easily moved out of the way with no excessive force in case of a power failure.</a>	No	Yes	Not Accepted	EASA did not consider electrically-operated features in developing the guidance included in the CM. EASA does not exclude the possibility that such features may be certifiable using the guidance of the CM. However, this determination will have to be made in the context of each individual seat installation certification project.