Vehicle related requirements for $i$-Size CRS

Overview on Amendments for ECE Regulation No. 14 and ECE Regulation No. 16
Vehicle related requirements for \textit{i}-Size CRS

ECE R14 draft amendments:

- Definition of “\textit{i}-Size seating position”

- Determination of vehicle floor contact surface

- Performance requirements and test procedure

- “\textit{i}-Size seating position” markings
Vehicle related requirements for \(i\)-Size CRS

Definition of “\(i\)-Size seating position”:

Ensure installation of

- R2 envelope
- F2X envelope
- Support leg installation assessment volume
- Top tether
Vehicle related requirements for \(i\)-Size CRS

Determination of the vehicle floor contact surface
Vehicle related requirements for \(i\)-Size CRS

Test tool: Modified SFAD (SFAD\(_{SL}\))

Example for an SFAD\(_{SL}\)

Note:
Dimensions for support leg foot are binding (width = 80mm, diameter = 30mm)
Vehicle related requirements for \(i\)-Size CRS

Test procedure using SFAD\(_{SL}\):

\[ F = 8 \text{ kN} \pm 0,25 \text{ kN} \]

max. 125mm

Point X

Note: Procedure is identical to the one used for combined top tether & lower anchorage system testing.

Idea is to not differentiate between anti-rotation devices: Same purpose – same performance requirement!

Complete vehicle floor contact surface shall comply!
Vehicle related requirements for \(i\)-Size CRS

“\(i\)-Size seating position” Marking:

- Concept of having a mandatory marking for “\(i\)-Size seating positions”
- Use one specific symbol for \(i\)-Size indication
  (to be identical for CRS and vehicle)
- Label shall contain no text
- Marking size for seating positions shall remain (min. \(\Theta\) 13mm)

\(i\)-Size marking: New OICA Proposal A

\(i\)-Size marking: New OICA Proposal B
Vehicle related requirements for \(i\)-Size CRS

ECE R16 draft amendments:

- Geometrical assessment procedure for “\(i\)-Size seating positions” (F2X, R2, support leg installation assessment volume)

- Vehicle handbook information, e.g. installation table
Vehicle related requirements for i-Size CRS

Definition of the support leg installation assessment volume
Vehicle related requirements for \( \text{i-Size} \) CRS

Vehicle owner’s manual installation instructions & information:

Vehicle manufacturer to provide information on i-Size CRS installation (“i-Size seating positions”) and additional information e.g. in case of limitations for front seat adjustment, etc. in the owner’s manual

<table>
<thead>
<tr>
<th>Seating position</th>
<th>Front Passenger Outboard</th>
<th>Front Passenger Centre</th>
<th>Rear Outboard Left</th>
<th>Rear Outboard Right</th>
<th>Rear Centre</th>
<th>Intermediate Outboard Left</th>
<th>Intermediate Outboard Right</th>
<th>Intermediate Centre</th>
</tr>
</thead>
<tbody>
<tr>
<td>i-Size Child Restraint Systems</td>
<td></td>
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</tbody>
</table>

Key of letters to be inserted in the above table:

- \( i-U \) = Suitable for i-Size "universal" Child Restraint Systems (forward and rearward facing).
- \( i-UF \) = Suitable for forward-facing i-Size "universal" Child Restraint Systems only.
- \( X \) = Seating position not suitable for i-Size "universal" Child Restraint Systems.

Note: Orientation is normal driving direction; columns for seating positions not available in a vehicle can be deleted.

Example for information to be provided
Vehicle related requirements for i-Size CRS

Next steps:

- OICA to prepare informal document for May 2011 GRSP on draft amendments for ECE R14 & R16

- Include latest development of the support leg attachment volume

Timing:

- Informal documents ready for May GRSP