

Proposal for Supplement 6 to the 06 series of amendments to Regulation No. 16 (Safety-belt)

The modifications to the existing text of the Regulation are marked in bold for new or strikethrough for deleted characters.

I. Proposal

Add a new paragraph 2.32., to read:

"2.32. "Universal booster seating position" means a location in the vehicle which permits installation of a universal booster seat child restraint system and a universal booster cushion child restraint system, as defined in Regulation No. 129."

Paragraphs 2.32. to 2.47., renumber as 2.33. to 2.48.

Paragraph 8.3.6., amend to read:

"8.3.6. Any i-Size seating position ...

...

The pitch angle used for the geometrical assessment above shall be as measured in paragraph 5.2.3.4. of Regulation No. 14.

There shall be no interference between the support leg installation assessment volume and any vehicle part.

~~Compliance with this requirement can be proven by a physical test or computer simulation or representative drawings.~~

Compliance with these installation requirements may be assessed by a physical test, computer simulation, representative drawings, or any other means deemed acceptable to the type approval authority."

Add a new paragraph 8.3.7., to read:

"8.3.7. Any Universal booster seating position shall allow the installation of the universal booster child restraint fixtures as defined in Annex 17, Appendix 5 –ISO F4, without ISOFIX attachments (see detail B).

Compliance with these installation requirements may be assessed by a physical test, computer simulation, representative drawings, or any other means deemed acceptable to the type approval authority."

Annex 17, paragraph 1., amend to read:

"1. Compatibility with child restraint systems

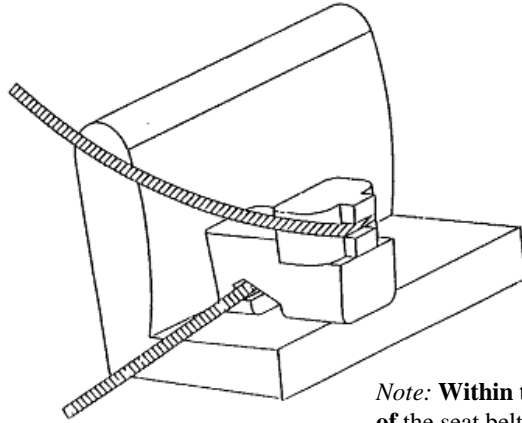
1.1. The vehicle manufacturer shall include in the vehicle handbook advice on the suitability of each passenger seating position for the carriage of children up to 12 years old (or up to 1.5 m tall), or the fitting of child restraint systems. This information shall be given in the national language, or at least one of the national languages, of the country in which the vehicle is offered for sale.

- 1.1.1.** For each forward-facing passenger seating position, and for each ISOFIX position, the vehicle manufacturer shall either:
- (a) Indicate that the seating position is suitable for child restraints of the "universal" category (see paragraph 1.2.3. below);
 - (b) Indicate if the ISOFIX position is suitable for ISOFIX child restraint systems of the "universal" category (see paragraph 1.2.3. below);
 - (c) Provide a list of child restraint systems of the "semi-universal", "restricted" or "vehicle-specific" categories, suitable for that vehicle seating position, indicating the mass group(s) for which the restraints are intended;
 - (d) Provide a list of ISOFIX child restraint systems of the "semi-universal", "restricted" or "vehicle specific" categories, suitable for that vehicle ISOFIX position, indicating the mass group and the ISOFIX size class for which the ISOFIX child restraints are intended;
 - (e) Provide a built-in child restraint system, indicating the mass group(s) for which the restraint is intended and the corresponding configuration(s);
 - (f) Provide any combination of (a), (b), (c), (d), (e);
 - (g) Indicate the mass group(s) of the children which shall not be carried in that seating position.
- 1.1.2.** The vehicle manufacturer shall identify within the handbook each seating position which is also suitable for the accommodation of:
- (a) **Any universal booster child restraint system (see paragraph 1.5. below);**
 - (b) **any i-Size child restraint system (see paragraph 1.3.4. below); or**
- 1.2.** If a seating position is only suitable for use with forward-facing child restraint systems, this shall be indicated.
- Tables in a suitable format for the above information are given in Appendix 3 to this annex.
- 1.2.3.** A child restraint system or ISOFIX child restraint system, of the universal category means a child restraint approved to the "universal" category of Regulation No. 44, Supplement 5 to 03 series of amendments. Seating positions, or ISOFIX positions, which are indicated by the vehicle manufacturer as being suitable for the installation of child restraints systems or ISOFIX child restraints systems shall comply with the provisions of Appendix 1 or 2 to this annex. Where applicable any restriction on the simultaneous use on adjacent positions of ISOFIX child restraint systems and/or between ISOFIX-positions and adult seating positions shall **be reported in the relevant Table 2 of Appendix 3 to this annex.**
- 1.3.4.** An i-Size child restraint **system** means a child restraint **system** approved to the i-Size category of Regulation No. 129. Seating positions, which are indicated by the vehicle manufacturer as being suitable for the installation of i-Size child restraints systems shall comply with the provisions of Appendix 2 to this annex. Where applicable, any restriction on the simultaneous use on adjacent positions of ISOFIX child restraint systems or i-Size child restraint systems and/or between ISOFIX positions, i-Size positions and adult seating positions shall **be reported in the relevant Table 2 of Appendix 3 to this annex.**

- 1.5. **Universal booster child restraint system means a child restraint system approved to the universal booster category of Regulation No. 129, (booster seats and booster cushions). Seating positions, which are indicated by the vehicle manufacturer as being suitable for the installation of universal booster child restraints systems shall comply with the provisions of Appendix 5 to this annex."**

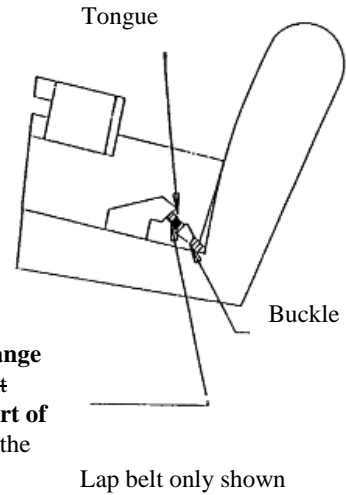
Annex 17, Appendix 1, Figures 2 and 3, amend to read:

"Figure 2
Installation of fixture onto vehicle seat
(see paragraph 2.6.1.)



Note: Within the adjustment range of the seat belt, the webbing must shall contact, at a minimum, part of the curved edge on both sides of the fixture.

Figure 3
Check for compatibility
(see paragraphs 2.6.1. and 3.2)



Annex 17, Appendix 3, Table 1, amend the title to read:

"Example Table of vehicle handbook information on child restraint systems installation suitability for various seating positions"

Annex 17, Appendix 3, Table 1, add a note at the end to read:

"Note: When this information is included into a single table it is not necessary to provide a further separate table in the vehicle handbook."

Annex 17, Appendix 3, Table 2, amend the title to read:

"Example Table of vehicle handbook information on ISOFIX child restraint systems installation suitability for various ISOFIX positions"

Annex 17, Appendix 3, Table 2, add a note at the end to read:

"Note: When this information is included into a single table it is not necessary to provide a further separate table in the vehicle handbook."

Annex 17, Appendix 3, Table 3, replace by:

"[Table 3

Example table of vehicle handbook information for R129 Enhanced child restraint systems for installation in various seating positions

	Seating position							
	Front passenger outboard	Front passenger centre	Rear outboard left	Rear outboard right	Rear centre	Intermediate outboard left	Intermediate outboard right	Intermediate centre
i-Size Child Restraint Systems	i-U							
Universal booster seat	U		U					
Universal booster cushion	U			NU				

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

Key of letters to be inserted in the above table in row

“Child Restraint Systems approved under UN-Regulation No. 129”:

i-U Suitable for i-Size "universal" Child Restraint Systems forward and rearward facing.

U Universal

NU Not-universal => booster cushion only!

i-UF Suitable for forward-facing i-Size "universal" Child Restraint Systems only.

i-L Suitable for particular “Specific vehicle ISOFIX” Enhanced child restraint systems (ECRS) given in the attached list. These ISOFIX ECRS are those of the "specific vehicle" category. If not approved for all ISO volumes, the available ISO volume(s) shall be indicated after the L in brackets using the reference letter (e.g. B1, B, E) and restrictions to this volume(s) shall be explained in the vehicle handbook.

U Integral universal child restraint systems fixed by adult seat belt.

X Seating position not suitable for Enhanced Child Restraint Systems **approved under UN-Regulation No. 129.]**"

Add Annex 17, Appendix 5, to read:

"Annex 17, Appendix 5

Provisions concerning the installation of Universal Booster Seat enhanced child restraint systems

1. **General**

1.1. **The test procedure and the requirements in this appendix shall be used to determine the suitability of seating positions for the installation of child restraints of the "universal booster seat" and “universal booster cushion” category.**

1.2. **The tests may be carried out in the vehicle or in a representative part of the vehicle.**

Compliance with these installation requirements may be assessed by a physical test, computer simulation, representative drawings, or any other means deemed acceptable to the type approval authority.

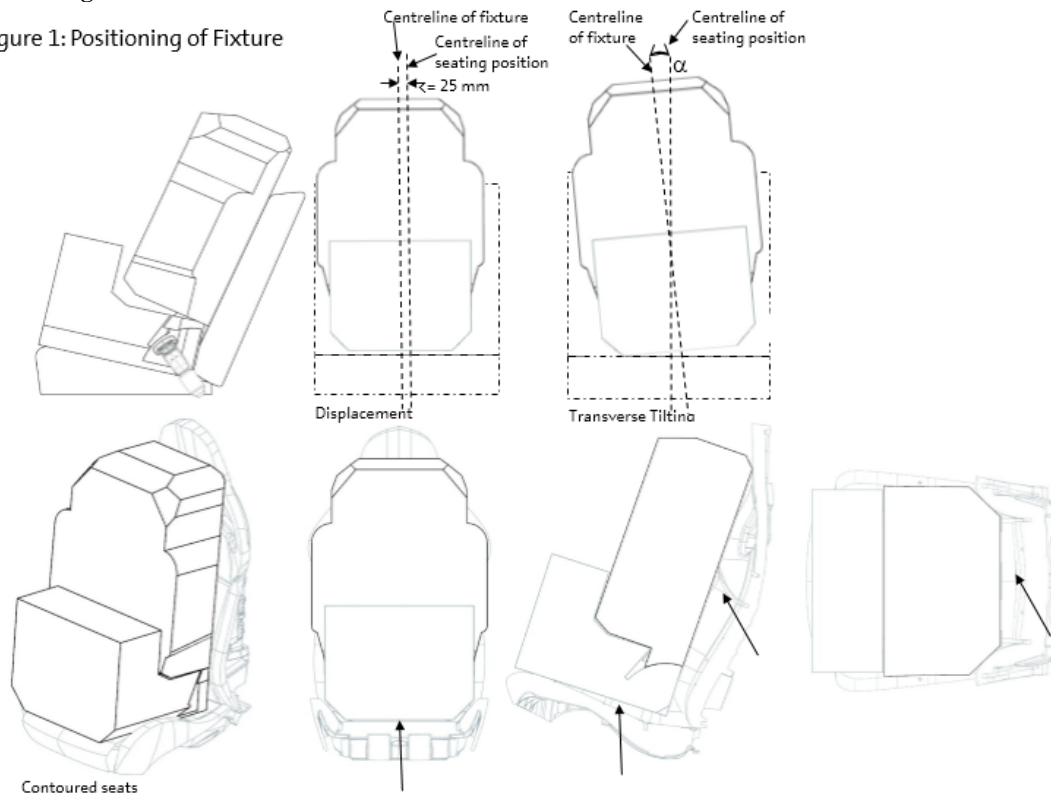
2. Test procedure
 - 2.1. Adjust the seat to its fully rearward and lowest position.
 - 2.2. Adjust the seat-back angle to the manufacturer's design position. In the absence of any specification, a torso angle of 25 degrees from the vertical, or the nearest fixed position of the seat-back, should be used.
 - 2.3. When checking a CRF, on a rear seat, the vehicle seat located in front of this rear seat may be adjusted longitudinally forward but not further than the mid position between its rearmost and fore most positions. The seat backrest angle may also be adjusted, but not to a more upright angle than corresponding to a torso angle of 15°.
 - 2.4. If necessary head restraints may be adjusted or removed.
 - 2.5. Set the shoulder anchorage to the position defined by the vehicle manufacturer.
 - 2.6. Place a cotton cloth on the seat-back and cushion.
 - 2.7. Place the fixture (as described in Figure 1 of this appendix) on the vehicle seat. The top of the fixture may touch the vehicle roof. Compression of the seat cushion is allowed to move the fixture into position.
 - 2.8. The fixture shall be restrained by the vehicle's seat belt which shall be installed as shown in figure 2.
 - 2.9. Ensure that the fixture is located with its centreline on the centreline of the seating position $[\pm 25]$ mm with its centreline parallel with the centreline of the vehicle seat.
 - 2.10. Push rearwards on the centre of the front of the fixture with a force $100\text{ N} \pm 10\text{ N}$, applied parallel to the lower surface, and remove the force.
 - 2.11. When possible, push vertically downwards on the centre of the upper surface of the fixture with a force of $100\text{ N} \pm 10\text{ N}$, and remove the force.
3. Requirements
 - 3.1. It shall be possible to secure the fixture in the seating position using the 3-point seat belt and to buckle up the seat belt. The lap portion of the belt shall touch the fixture on both sides at the rear of the lap belt path (see Figure 2).
 - 3.2. The roll angle as shown in Figure 1 shall be equal to or less than $[5^\circ]$.
 - 3.3. The base of the fixture shall be in contact with the seat cushion, and the back face of the fixture shall be in contact with the seat back or head restraint. Full contact with the seat is not necessary, "gaps" due to the vehicle seats contours are permitted as shown in Figure 1.
 - 3.4. Should the above requirements not be met with the adjustments indicated in paragraphs 2.1. to 2.5. above, the seat, seat-back and safety-belt anchorages may be adjusted to an alternative position designated by the manufacturer for normal use at which the above installation procedure shall be repeated and the requirements again verified and

met. This alternative position shall be included as information in the appropriate table.

- 3.5. Where the 135cm CRF cannot be installed, then install the booster cushion CRF (lower part of the figure2) following the above procedure.
4. The fixture below shall be constructed with a mass of 10 kg +/- 5kg and shall be of suitable durability and stiffness to satisfy the functional requirements.

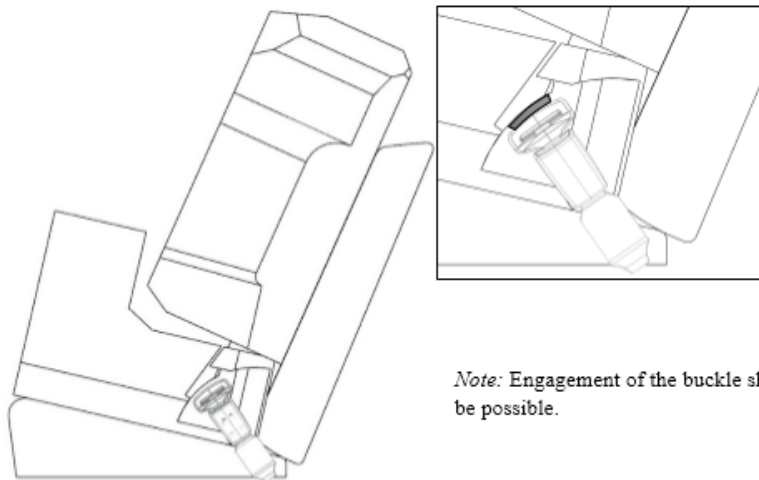
**Figure 1
Positioning in Seat**

Figure 1: Positioning of Fixture



**Figure 2
Belt buckling**

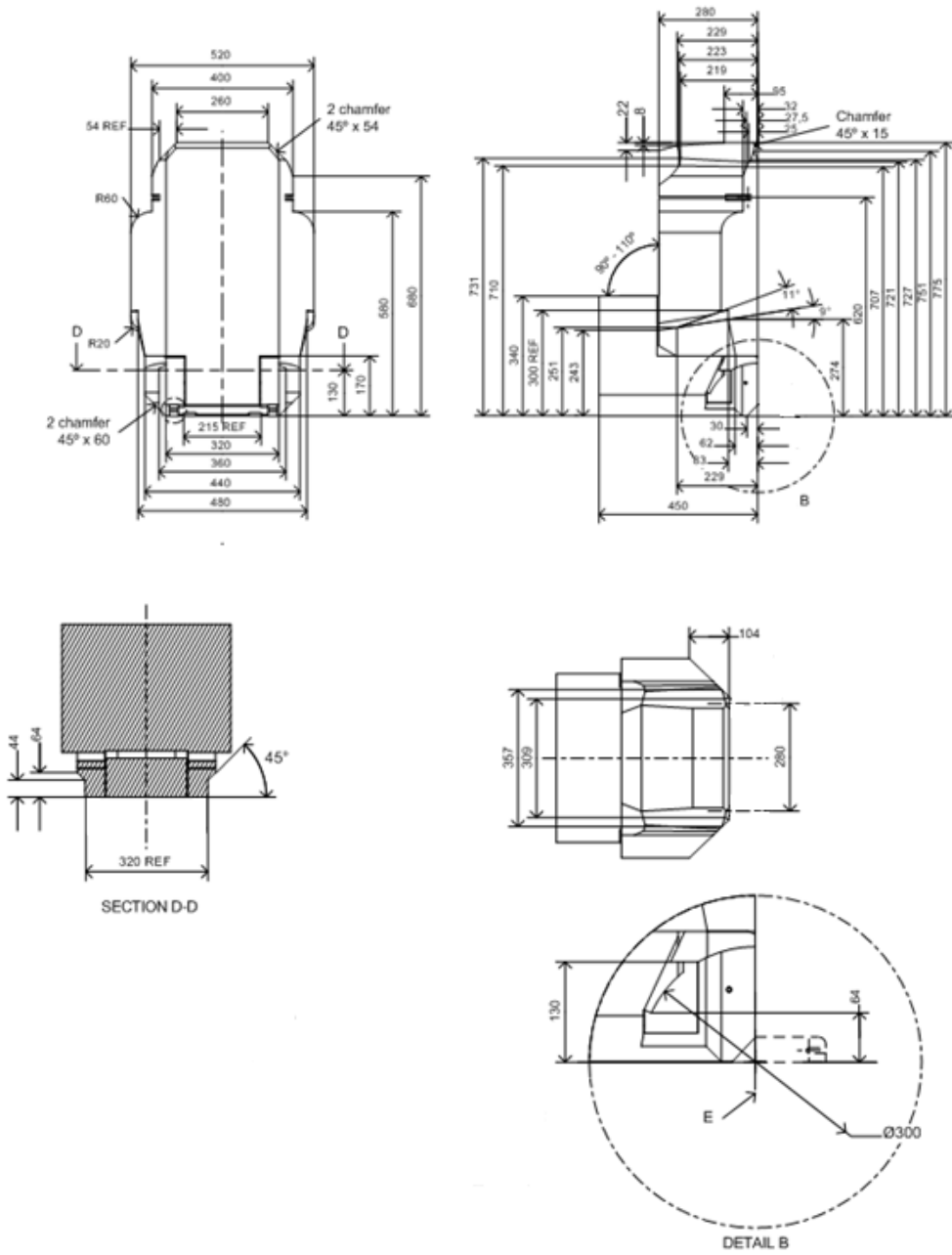
Figure 2 Belt Buckling



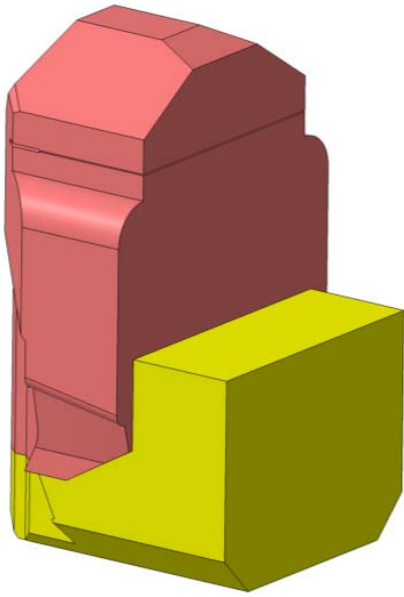
Note: Engagement of the buckle shall be possible.

***Note:* Engagement of the buckle shall be possible.**

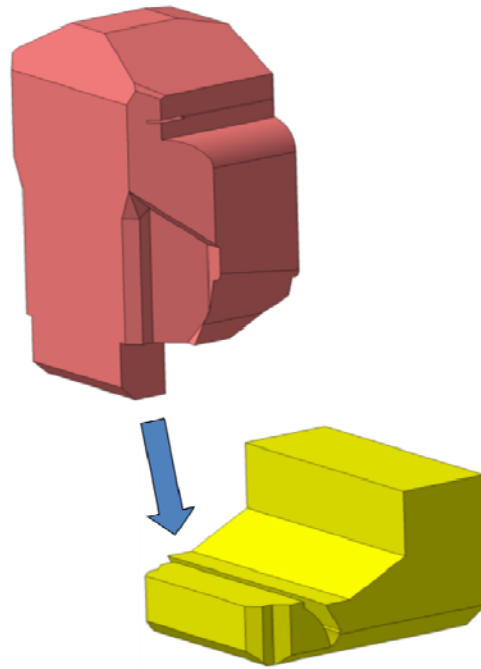
Universal Booster Seat Fixture: without ISOFIX, or with anchorages removed or stowed within the body of the fixture (behind line E, as defined by detail B).



E: Reference line for stowing of ISOFIX attachment



To update: Complete 135 cm CRF



cushion only CRF"
