

Submitted by the expert from OICA

Informal document GRSP-59-20
(59th GRSP, 9-13 May 2016,
agenda item 9

Informal document GRSP-58-15-Rev.2
(58th GRSP, 8-11 December 2015,
agenda item 10)

Deleted: 7

Proposal for Supplement 8 to the 06 series of Amendments to Regulation No. 16 (seat belts)

Contents

	<i>Page</i>
Regulation	
1. Scope	
....	
Annexes	
....	
17 Requirements for the installation of safety-belts and restraint systems for adult occupants of power-driven vehicles on forward facing seats, for the installation of ISOFIX child restraint systems and i-size child restraint systems.....	
..	
Appendix 3:	
Table 1— Table of vehicle handbook information on child restraint systems installation suitability for various seating positions Example of detailed information e.g. for CRS manufacturers	xx
Table 2— Table of vehicle handbook information on ISOFIX child restraint systems installation suitability for various ISOFIX positions.....	xx
Table 3— Table of vehicle handbook information on i-Size child restraint systems for installation in various seating positions.....	xx
Appendix 4: Installation of 10-year manikin positions.....	---
....	

Annex 17

Requirements for the installation of safety-belts and restraint systems for adult occupants of power-driven vehicles on forward facing seats, for the installation of ISOFIX child restraint systems and i-size child restraint systems

1. Compatibility with child restraint systems

1.1. The vehicle manufacturer shall include in the vehicle handbook **simple advice to the vehicle user** 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 **by pictograms, or** in the national language, or at least one of the national languages, of the country in which the vehicle is offered for sale.

For each forward-facing passenger seating position, and for each **specified** ISOFIX position, the vehicle manufacturer shall ~~either~~ **indicate:**

- (a) ~~Indicate that~~ **If** the seating position is suitable for child restraints of the "universal" category (see paragraph 1.2. below), **and/or**
- (b) ~~Indicate if the ISOFIX position is suitable for ISOFIX child restraint systems of the "universal" category (see paragraph 1.2. 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.~~
- (b) **If the seating position is suitable for i-size child restraint systems (see paragraph 1.4 below), and/or**
- (c) **If the seating position is suitable for child restraint systems other than those specified above (e.g. see paragraph 1.3 below).**

~~The vehicle manufacturer shall identify within the handbook each seating position which is also suitable for the accommodation of an i-Size child restraint system (see paragraph 1.3 below).~~

If a seating position is only suitable for use with forward-facing child restraint systems, this shall **also** be indicated **in the vehicle handbook**.

In addition to the above defined information for the vehicle user, the vehicle manufacturers shall make available the information as defined by Appendix 3 of this Annex. For example, this information can be included in separate Annexes of the vehicle handbook, or in technical descriptions of the vehicle or on a dedicated webpage.

~~Tables in a suitable format for the above information are given in Appendix 3 to this annex.~~

1.2. 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,

Formatted: Not Strikethrough

~~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 Table 2 of Appendix 3 to this annex.~~

1.3. An ISOFIX child restraint shall be approved to Regulation No. 44, Supplement 5 to 03 series of amendments or to Regulation No. 129. ISOFIX positions, which are indicated by the vehicle manufacturer as being suitable for the installation of ISOFIX child restraints systems shall comply with the provisions of Appendix 2 to this annex.

1.3.4 An i-Size child restraint means a child restraint 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 Table 2 of Appendix 3 to this annex.~~

Annex 17 - Appendix 2

Provisions concerning the installation of forward-facing and rearward-facing ISOFIX child restraint systems of universal and semi-universal categories installed on ISOFIX or i-Size positions

1. General
 - 1.1. The test procedure and the requirements in this appendix shall be used to determine the suitability of ISOFIX positions for the installation of ISOFIX child restraint systems of universal and semi-universal categories, as well as to determine the suitability of i-Size seating positions for installing i-Size child restraint systems..
 - 1.2. The tests may be carried out in the vehicle or in a representative part of the vehicle.

For i-Size seating positions, compliance with the i-Size support leg installation requirements may be assessed by a physical test, computer simulation or representative drawings.
2. Test procedure

~~For any ISOFIX positions in the vehicle, defined as indicated by the vehicle manufacturer, in Table 2 of Appendix 3, as well as for any i-Size seating position if any, as indicated by the vehicle manufacturer in Table 3 of Appendix 3, it has to~~ **shall be checked to ensure that the CRF listed in paragraph 4 of this Appendix it is possible to can be accommodated. Where the vehicle manufacturer has indicated that the ISOFIX position(s) will accommodate a particular CRF, then it shall be assumed that smaller CRFs of the same orientation may be accommodated. the corresponding child restraint fixture(s) (CRF) and additionally in case of an i-Size seating position, the i-Size support leg installation assessment volume:**

i-Size seating positions, defined by the vehicle manufacturer, shall be checked to ensure that it is possible to accommodate both the ISO/R2 and the ISO/F2X child restraint fixtures (see paragraph 4 of this Annex) including the i-Size support leg installation assessment volume.

For both, ISOFIX and i-size position(s), the following procedure shall apply:

 - 2.1. When checking a CRF, on a seat, with or without i-Size support leg installation assessment volume, this seat may be adjusted longitudinally to its rearmost position and in its lowest position.
 - 2.2. ...
 - ...
4. ISOFIX child restraint system size classes and fixtures

- A – ISO/F3: Full-Height Forward Facing toddler CRS
- B – ISO/F2: Reduced-Height Forward Facing toddler CRS
- B1 – ISO/F2X: Reduced-Height Forward Facing toddler CRS
- C – ISO/R3: Full-Size Rearward Facing toddler CRS
- D – ISO/R2: Reduced-Size Rearward Facing toddler CRS
- E – ISO/R1: Rearward Facing infant CRS
- F – ISO/L1: Left Lateral Facing position CRS (carry-cot)
- G – ISO/L2: Right Lateral Facing position CRS (carry-cot)

The fixtures below shall be constructed with a mass between 5 and 15 kg and shall be of suitable durability and stiffness to satisfy the functional requirements.

<i>Mass group</i>	<i>ISOFIX size class</i>	<i>Fixture (CRF)</i>
0 – up to 10 kg	F	ISO/L1
	G	ISO/L2
	E	ISO/R1
0+ - up to 13 kg	C	ISO/R3
	D	ISO/R2
	E	ISO/R1
I - 9 to 18 kg	A	ISO/F3
	B	ISO/F2
	B1	ISO/ F2X
	C	ISO/R3
	D	ISO/R2

...

Figure 9
3D view of the i-Size support leg installation assessment volume for assessing compatibility of the i-Size seating positions with support legs of i-Size child restraint systems

Annex 17 – Appendix 3

Table 1
Table of vehicle handbook information on child restraint systems
installation suitability for various seating positions

<i>Mass Group</i>		<i>Seating position (or other site)</i>				
		<i>Front passenger</i>	<i>Rear outboard</i>	<i>Rear centre</i>	<i>Intermediate outboard</i>	<i>Intermediate centre</i>
Group 0	up to 10 kg					
Group 0+	up to 13 kg					
Group I	9 to 18 kg					
Group II	15 to 25 kg					
Group III	22 to 36 kg					

Key of letters to be inserted in the above table:

- U = Suitable for "universal" category restraints approved for use in this mass group.
- UF = Suitable for forward facing "universal" category restraints approved for use in this mass group.
- L = Suitable for particular child restraints given on attached list. These restraints may be of the "specific vehicle", "restricted" or "semi-universal" categories.
- B = Built in restraint approved for this mass group.
- X = Seat position not suitable for children in this mass group.

Table 2
Table of vehicle handbook information on ISOFIX child restraint systems installation suitability for various ISOFIX positions

Mass Group	Size class	Fixture	Vehicle ISOFIX positions					Other sites
			Front passenger	Rear outboard	Rear centre	Intermediate outboard	Intermediate centre	
Carrycot	F	ISO/L1						
	G	ISO/L2						
		(+)						
0 – up to 10 Kg	E	ISO/R1						
		(+)						
0+ – up to 13 kg	E	ISO/R1						
	D	ISO/R2						
	C	ISO/R3						
		(+)						
I – 9 to 18 kg	D	ISO/R2						
	C	ISO/R3						
	B	ISO/F2						
	B+	ISO/F2X						
	A	ISO/F3						
		(+)						
II – 15 to 25 kg		(+)						
III – 22 to 36 kg		(+)						

(+) = For the CRS which do not carry the ISO/XX size class identification (A to G), for the applicable mass group, the car manufacturer shall indicate the vehicle specific ISOFIX child restraint system(s) recommended for each position.

Key of letters to be inserted in the above table

- IUF** = Suitable for ISOFIX forward child restraints systems of universal category approved for use in the mass group
- IL** = Suitable for particular ISOFIX child restraint systems (CRS) given in the attached list. These ISOFIX CRS are those of the "specific vehicle", "restricted" or "semi-universal" categories.
- X** = ISOFIX position not suitable for ISOFIX child restraint systems in this mass group and/or this size class.

Table 3
Table of vehicle handbook information on i-Size 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									

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:	
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.

Example of detailed information e.g. for CRS manufacturers
This table gives technical information specifically intended e.g. for CRS manufacturer and as such translation into national languages is not required.

Seat position number	Seating position								
	1	2	3	4	5	6	7	8	9
Seating position suitable for universal belted (yes/ no)									
i-Size seating position (yes/no)									
Seating position suitable for lateral fixture (L1/ L2)									
Largest suitable rearward facing fixture (R1/ R2/ R3)									
Largest suitable forward facing fixture (F1/F2/F2X/F3)									

- Deleted: [
- Deleted:]
- Deleted: [
- Deleted:]
- Deleted: [
- Deleted:]
- Deleted: [
- Deleted:]
- Deleted: [
- Deleted:]

- 1) Add information for each non i-size seating position compatible with a support leg, as described in this regulation
- 2) Add information for each seating position equipped with lower ISOFIX anchorages but without Top Tether, according to this regulation.
- 3) Add information if the adult safety belt buckles are located laterally in between both ISOFIX lower anchorages.

Note:

- a) Orientation is normal driving direction; columns for seating positions not available in a vehicle can be deleted.
- b) The numbering of seating positions shall be made on basis of following definition:

Seat Number	Position in the vehicle
1	Front left
2	Front center
3	Front right
4	2 nd row left
5	2 nd row center
6	2 nd row right
7	3 rd row left
8	3 rd row center
9	3 rd row right

The information about the seat position number can be given by means of a table or by sketches or pictograms.

Justification:

During the work updating Regulation 129 it became apparent that we need to simplify the Regulation 16 handbook information. Current information is too complex for a consumer to be easily used, bearing in mind that the whole concept of i-size was to completely eliminate the need for “vehicle handbook instruction” since all positions are marked.

In particular, it is proposed to define two types of information: the easy to read information needed for the customer and the detailed information used by the CRS manufacturers when approving their systems.

For this reason, interested bodies (EU, Consumer International, Governmental experts, Euro NCAP, OICA and CLEPA) met to develop a new concept.

OICA therefore carried out the work to draft this proposal on the basis of this meeting conclusion.