

Informal document **GRSP-54-35**
(54th GRSP, 17 - 20 December 2013,
agenda item 19)

ECE Regulation N°129

54th session of GRSP 17-20 December 2013

From Phase 1 to Phase 3

- Phase 1 dedicated to:
 - ISOFIX Universal Integral CRS
 - i-size
- Phase 2 dedicated to:
 - Booster (ISOFIX or Non ISOFIX)
 - Booster seat
 - Booster cushion
- Phase 3 dedicated to:
 - Stand alone belted Integral CRS





UNECE 129 Phase 1 (i-Size)



- ECE 129

Date of entry into force as an annex to the 1958 Agreement: 9 July 2013

Corrigendum 1 to the original version of the Regulation

Date of entry into force: 9 July 2013

Supplement 1 to the original version of the Regulation

Date of entry into force: [26 January 2014]

Proposal for supplement 2 to the original version of the Regulation

ECE/TRANS/WP.29/2013/110: 23 July 2013 and par.61 of the draft report

ECE/TRANS/WP.29/2013/CRP.5/Add.7

- ECE 16

Supplement 3 to the 06 series of amendments

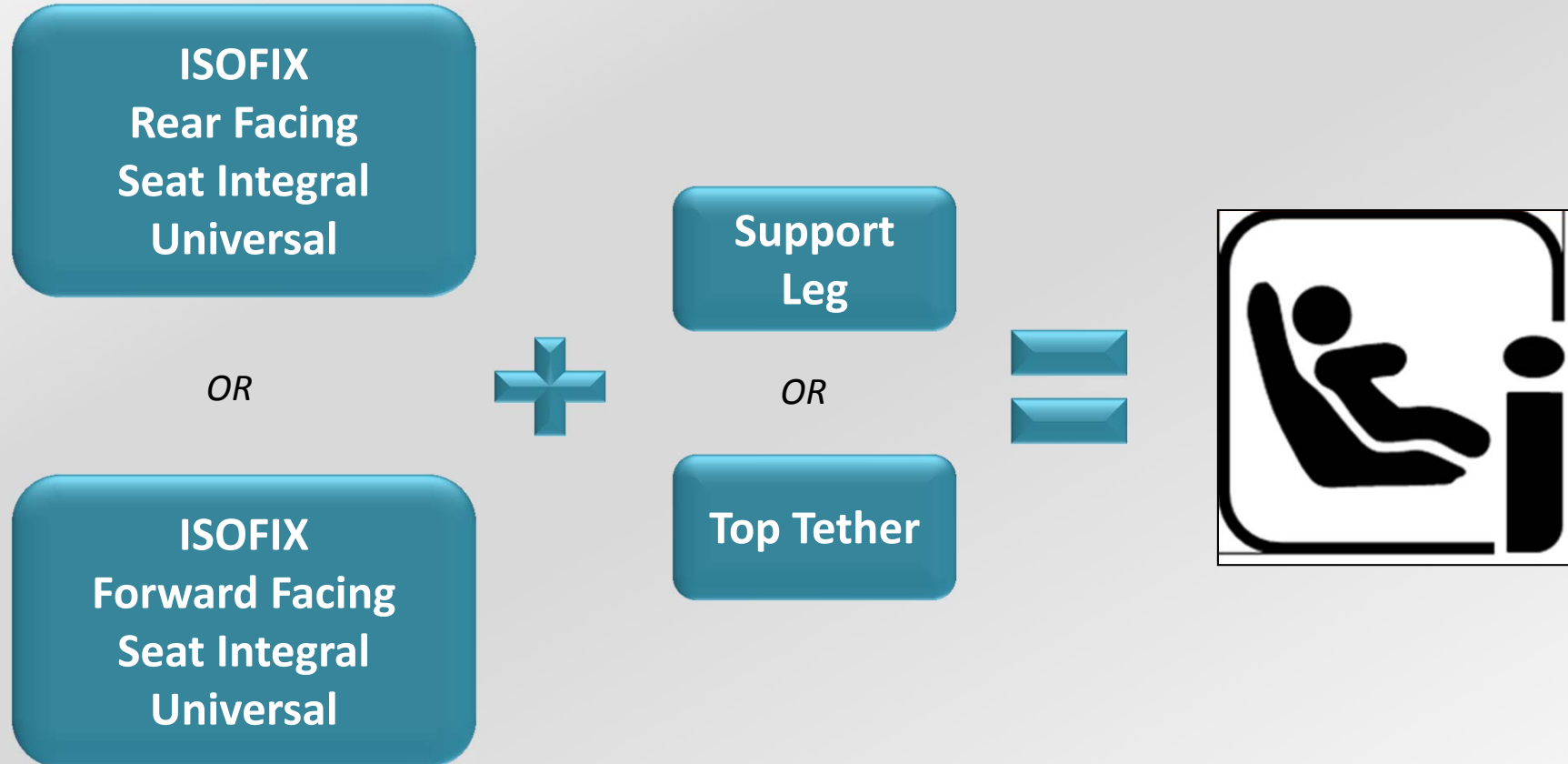
Date of entry into force: 15 July 2013

- ECE 14

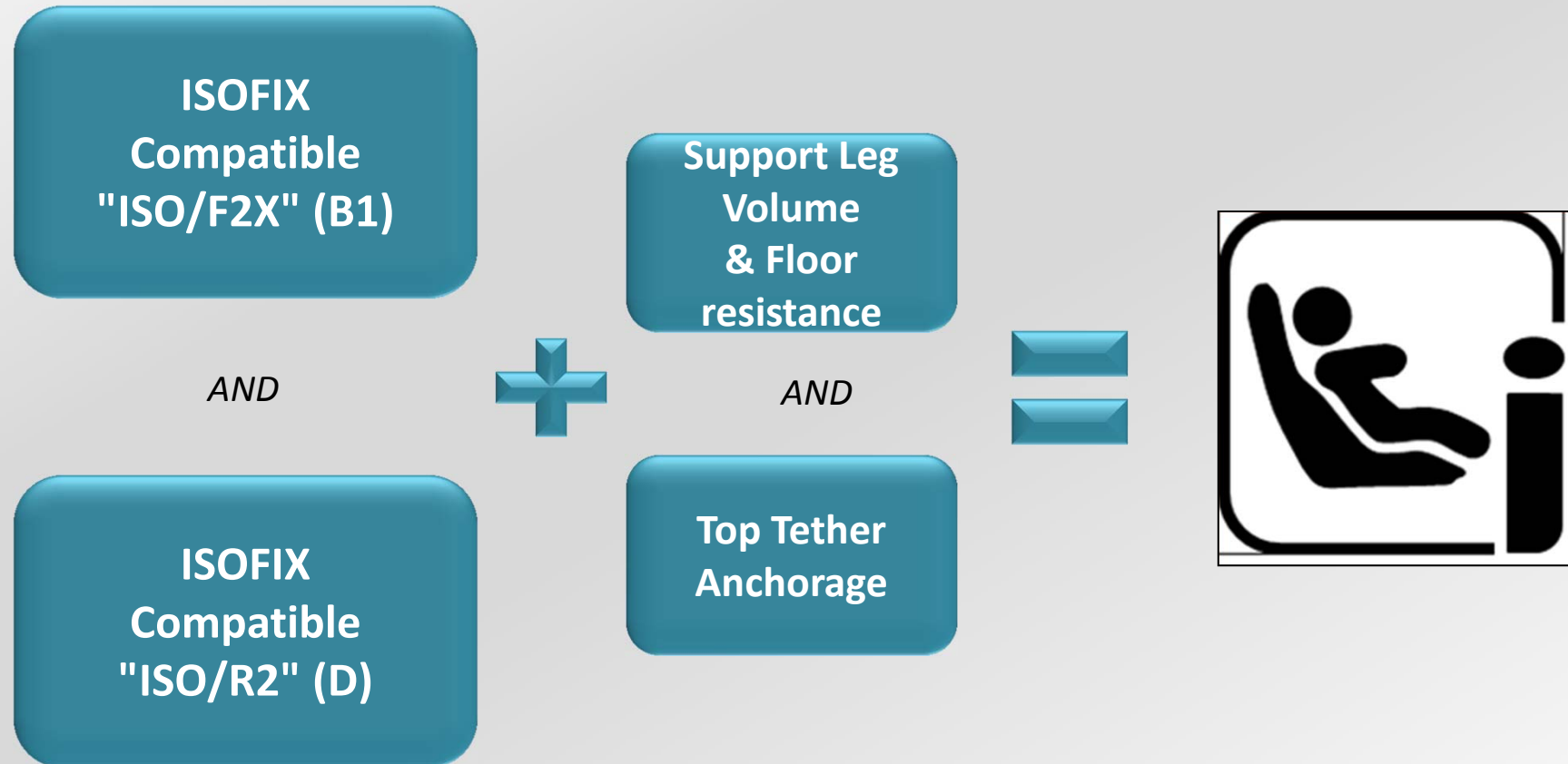
Supplement 4 to the 07 series of amendments

Date of entry into force: 15 July 2013

What does i-Size CRS mean?



What does i-Size seating position mean?



The 6 key pillars of i-Size



ISOFIX Integral
Universal

RF 15 months
Mandatory

Side Impact

Classification using
child size

New Dummies &
Performance
Criteria & Test
Bench

Better
Compatibility CRS
Vehicle

Why a Supplement 3 to ECE R129 ?

- Enhanced Child Restraint Systems (ECRS) combining a base attached with ISOFIX anchorages to the vehicle and a shell installed on it could be type approved according to UN Regulation No. 129 Phase 1.
- This shell should also be used at the choice of the user without the base and secured by an adult safety belt. Type approval according to UN Regulation No. 129 will be only possible after implementing Phase 3.
- This proposal aims at allowing the type approval of this configuration according to UN Regulation No. 129 Phase 1 under certain conditions and for a transitional period.

The travel system

- Global transportation system of babies
- Allowing fluent transportation of a baby from home to pushchairs and to the car.



Current situation in the market:

- a belted infant carrier
- a stroller
- a base for installation in cars



Infant carrier module – GRSP 2013/21

- Below 15 months
 - Less than 13 kg
 - Part of a i-Size product
 - Exempted from R44 labeling
 - Belt path allowed
-
- Belt routing according to R44-04 § 4.3.
 - Frontal impact according to R44-04 § 7.1.4.
 - Rear impact according to R44-04 § 7.1.4.
 - Overturning according to R44-04 § 7.1.3.

ECE 129 Phase 2

- ECE-TRANS-WP.29-GRSP-**2013-23e**
France_draft ECE 129ph2

- GRSP-**54-24e** (Chair of ECRS IWG)
Proposal for amendment to GRSP-2013-23

The 6 key pillars of "Universal Booster"

"Universal Booster"



Non-integral
"Universal Booster"

Lateral protection
 ≤ 135 cm => ECRS
 > 135 cm => Vehicle

Side Impact

Classification using
child size

New Dummies &
Performance
Criteria & Test
Bench

Better
Compatibility
CRS/Vehicle

Scope

Addition to phase 1 of:

- non-integral Child Restraint Systems
 - "Universal Booster" or
 - "Specific to vehicle Booster"

Definitions (1)

- 2.3.2. "Universal Booster" (Non-Integral Universal Child Restraint System) is a category of Child Restraint System for use in all ~~universal~~-seating positions of a vehicle **suitable for child restraints of the "universal" category**, as defined and approved according to **Table 1 of Annex 17 appendix 3 of Regulations Nos. 14 and 16**.
 - This category is separated in two subcategories:
 - (a) "Universal Booster Seat" with integrated backrest, **and compatible with the gabarit described in annex [xx]**
 - (b) "Universal Booster Cushion" without backrest
- 2.4.2. "Non-Integral" is a class of Child Restraint System, meaning that the retention of the child within the Child Restraint System is achieved by means connected directly to the vehicle (e.g. adult seat belt).

Definitions (2)

- 2.7.2. "Specific vehicle Booster" is a category of Non-Integral Child Restraint System connecting to specific vehicle types. All vehicle anchorages are to be approved according to Regulation No. 14. This category includes vehicles "Built-in Boosters". This category is separated in two sub-categories:
 - (a) "Specific Vehicle Booster Seat" with integrated backrest
 - (b) "Specific Vehicle Booster Cushion" without backrest
- 2.17.2. "Universal Vehicle booster seat fixture" means a fixture, according to dimensions given in figure [X] of Annex [Y] Appendix [Z] of Regulation No. 16, used by a Child Restraint System manufacturer to determine the appropriate dimensions of a Universal Booster and its compatibility with most vehicle seating positions, and in particular those which have been assessed according to Regulation No. 16 as being compatible with such a category of Child Restraint System.
- 2.51.2. "Universal Vehicle booster seating position" means a location which allows for the installation of a "Universal Booster" Child Restraint System as defined in this Regulation.

Application for type approval

(a) Application for an i-Size Child Restraint Systems; or

(b) Application for a "Specific vehicle ISOFIX"; or

(c) Application for a "Universal Booster" Child Restraint System; or

(d) Application for a "Specific to vehicle Booster" Child Restraint System.

Phase 1

Phase 2

Specifications

- Child Restraint Systems in the "universal booster" category are for use in all universal vehicle booster seating positions.
- Child Restraint Systems in the "specific vehicle booster" category are for use in the vehicle booster seating position if they are fitted in conformity with the vehicle manufacturer's instructions.

Specifications

- 6.1.3. According to the category as defined by Table 2., the Non- Integral Child Restraint System and the child shall be secured in a vehicle seating position:
 - 6.1.3.1. For "Universal Booster" category, this shall be by means of the adult safety seat belt and possibly with ISOFIX attachments if these are stowable.
 - 6.1.3.2. For "Specific Vehicle Booster" category; this shall be by means of the adult safety seat belt and possibly with ISOFIX attachments designed by the manufacturer of the Child Restraint System, secured to ISOFIX low anchorages as designed by the vehicle manufacturer.

Specifications

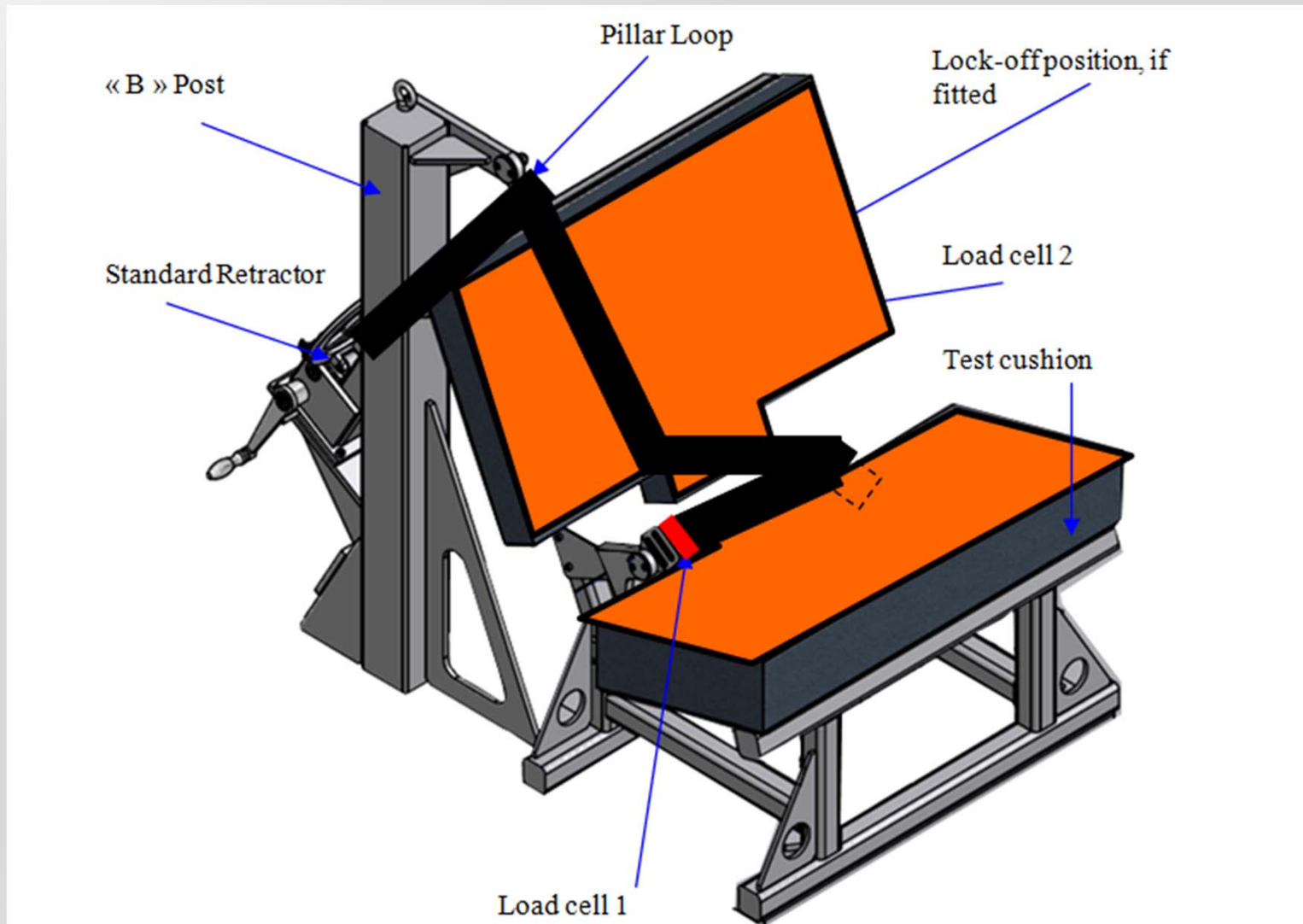
- 6.1.3.3. Child Restraint Systems of the "Universal Booster" category shall have a main load-bearing contact point, between the child restraint and the adult safety-belt. This point shall not be less than [150] mm from the Cr axis when measured with the child restraint on the dynamic test bench installed in accordance with paragraph 7.1.3.5.2.2. of this Regulation, without a dummy. This shall apply to all adjustment configurations and variable belt routings.

Note: Q serie of dummies have provision to include pressure based of abdominal sensors in near future and related injury criteria are under development.

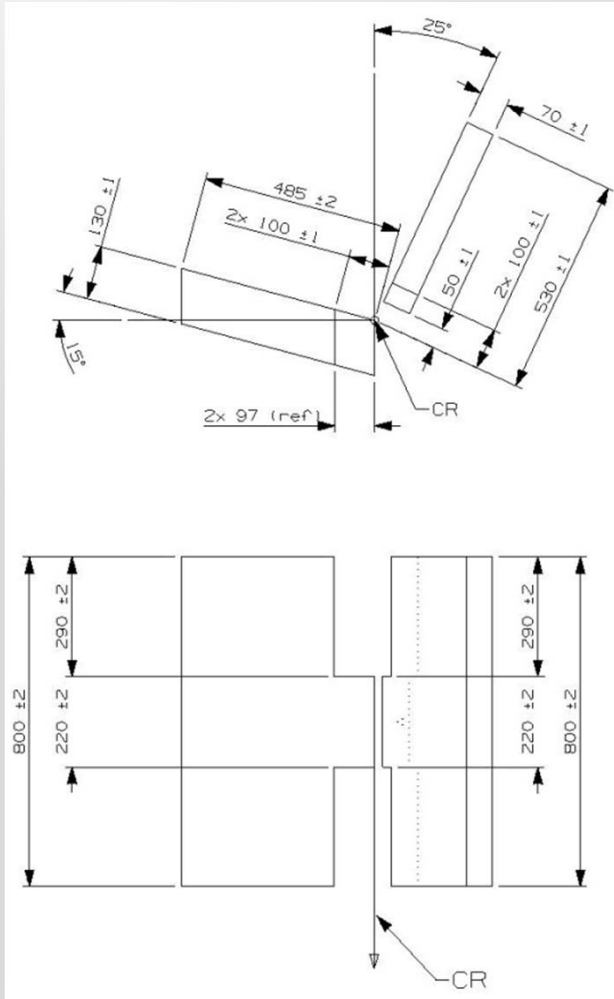
Specifications

- 6.1.3.4. If the adult seat belt is required to secure a "universal booster" category Child Restraint System on the dynamic test bench, then this seat belt is defined in Annex 24 to this Regulation. The Child Restraint System shall be secured onto the test bench using the appropriate standard seat belt described in Annex 24. The dummy shall not be installed unless the design of the restraint is such that the installation of a dummy would increase the amount of belt used. With the child restraint in the installed position, there shall be no tension in the belt, apart from that exerted by the standard retractor, where fitted. Where the retractor belt is used, this condition shall be met with at least 150 mm of belt remaining on the spool.
- 6.2.1.6. For the boosters, the lap portion of the adult seat belt shall be positively guided to ensure that the loads transmitted by the adult lap belt are transmitted through the pelvis. The shoulder belt portion of the adult safety belt shall be positively guided to ensure that the child torso and neck do not escape.

Tests



Tests



[Transitional provisions]

- 16.1. As from the official date of entry into force of the 01 series of amendments, no Contracting Party applying this Regulation shall refuse to grant ECE approval under this Regulation as amended by the 01 series of amendments.
- 16.2. As from 12-months after the date of entry into force of the 01 series of amendments, Contracting Parties applying this Regulation shall grant approvals only if the child restraint system type to be approved meets the requirements of this Regulation as amended by the 01 series of amendments.
- 16.3. During the 12-month period which follows the date of entry into force of the 01 series of amendments, Contracting Parties applying this Regulation can continue to grant type approvals to those child restraint systems which comply with the requirements of this Regulation as in its original version.
- 16.4. During the 36-month period which follows the date of entry into force of the 01 series of amendments, Contracting Parties applying this Regulation shall not refuse to grant extensions of approval to the original version of this Regulation.