

Note: Draft brochure as part of coordinated information campaign for UN Regulation No. 129.

Comments received by: Germany, Japan, USA and Russian Federation

I. Proposal

UN Regulation No 129 (Enhanced Child Restraint Systems) - Increasing children safety in vehicles

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Introduction

To reduce the risk of severe injuries in the case of accidents, it is important that babies and toddlers are transported against the driving direction for as long as possible.

Compared to older children and adults, they have weaker neck muscles carrying a relatively large and heavy head. A (too) early change into a forward-facing child restraint system (CRS), increases the risk of severe injury to the cervical spine in case of accidents.

A rearward facing CRS is too small if the child's head is on the same height of the upper edge of the shell, is above the edge or if the child has exceeded the weight approved for the group.

The use of a rearward facing CRS on a vehicle seat with activated passenger airbag is prohibited by law due to the danger it holds.

Please check the vehicle manual to determine whether a CRS may be placed on the passenger seat and how the airbag can be turned off, if necessary.

The new UN Regulation No. 129 also known as i-Size regulation has been developed to address better the above issue amongst others.

It has been developed by the Working Party on Passive Safety (GRSP), a subsidiary body of the World Forum for Harmonization of Vehicle Regulations of United Nations Economic Commission for Europe with the aim of enhancing child safety in Europe. The development of the technical contents of the UN Regulation has been dealt by an Informal Working Group of GRSP, led by France, gathering experts from ministries of transport, research institutions, technical services, consumer testing and industry.

After the adoption of the new UN Regulation No. 129 (i-Size) by UNECE/WP 29, annexed to the 1958 Agreement, in November 2012 and coming into force on 9 July 2013, Contracting Parties of the 1958 Agreement, Non-Governmental Organization (NGOs) were addressed by journalists, professionals, manufacturers of CRSs and consumers/parents to obtain more information.

The i-size UN Regulation

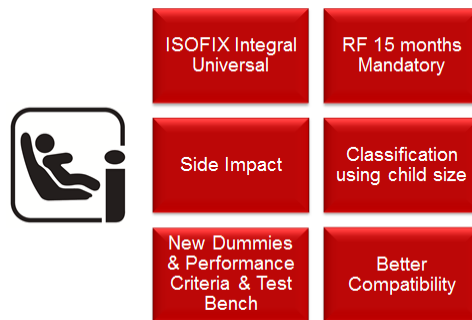
The main aim of the new CRS is to create a well-anchored seat like that of an adult, safeguarding children to the maximum degree possible in the event of a collision or of abrupt deceleration of the vehicle, by limiting the mobility of the child's body.

CRS that are produced based on the new i-Size Regulation provide the following major improvements for the transportation of children in cars:

- The mandatory rear-facing position of children is extended to 15 months, instead of 9 months in the current Regulation. Better protection for the developing head and neck of babies and toddlers.
- The introduction of a side impact test procedure which will lead to a better protection of the child's head especially for younger children. Until today, there was no dynamic test requirement for lateral impacts.
- New generation dummies which more closely represent actual behaviour of real children.
- Less installation options with only ISOFIX only, which means a lower risk of the seat being incorrectly fitted in the car. A simplified guide to choosing the right seat for the child, by using the height of the child as the only guideline.
- The introduction of a simplified classification, called "i-Size" which is based on the stature rather than the weight of the child, which was found to be more appropriate to ensure the best protection.
- Better compatibility car - CRS: i-size CRS will fit in any i-size ready seating position in a car (a vehicle fitting list will no longer be required). Both CRS and seating position can be recognised by the i-Size logo.

Figure 1

The 6 pillars of UN Regulation No. 129 (i-Size)



It is a new international safety regulation on device capable of accommodating a child occupant (popularly known as child seats), that will ultimately replace the current UN Regulation No. 44 dealing on CRS as well, which has been in place since over 30 years.

The phases and current state of the i-Size UN Regulation are:

Phase 1 (i-Size): Integral harness ISOFIX (CRS for younger children, Isofix attached) - Finalised and adopted by WP 29 in November 2012, came into force on 9 July 2013.

Phase 2: Non-integral CRS (booster seats [and booster cushions]) (CRS for older children) - Under development.

Phase 3: Belted integral harness CRS - is still an open cogitation.

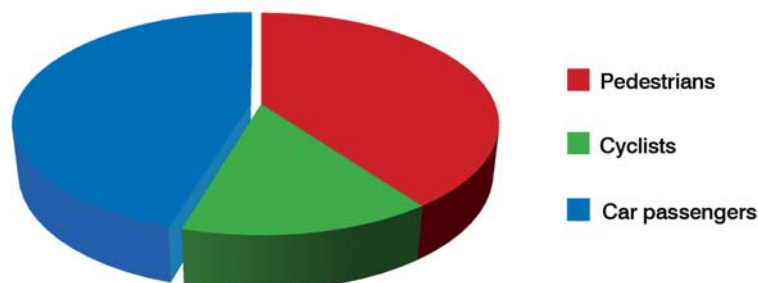
Once all 3 Phases of the new Regulation No. 129 are finalised, old style CRS will disappear gradually from the market.

Since the new i-Size does not permit forward - facing transport before 15 months, if parents buy the new i-size seat as of summer 2013, they will use it until their child is at least 15 months old in rearward facing position.

The scale of children safety in road traffic

In 2013, in Germany 4,464 children under the age of 15 years were killed or severely injured (KSI) in road traffic in Germany, 1,228 of these in cars. Of the 58 children killed in road traffic, 25 were killed in a car (43 percent) [Source: German Federal Statistical Office].

Killed children (under the age of 15 years) by type of road use



In 2012 in United Kingdom, the number of children aged 0-15 KSI in road traffic was 2,352. There were 346 car occupant child casualties in 2012, up 3 percent from 336 in 2011 [Source: Reported Road Casualties Great Britain: 2012 – Annual report. Department for transport]

Japan: in 2013 Number of children (age 15 or under) killed in traffic accidents: 94 (number of children that died within 24 hours of accident).

Breakdown of the 94 child fatalities

Car passenger: 24

Motorcycle passenger: 1

Cyclist: 22

Pedestrian: 47

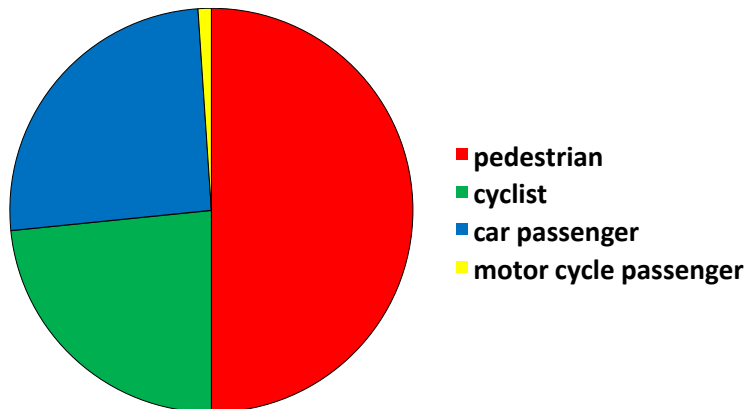
Breakdown of the 94 child fatalities

Car passenger: 24

Motorcycle passenger: 1

Cyclist: 22

Pedestrian: 47



What is the situation in:

EU??

South Africa??

Other countries??

United States: In 2012, there were a total of 33,561 traffic fatalities in the U.S. Children 14 and younger accounted for 1,168 (3%) of those traffic fatalities which is a 3-percent increase from the 1,139 fatalities in 2011. Of the total traffic fatalities there

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4,743 pedestrian fatalities. Children 14-and-younger accounted for 255 (5%) of those fatalities. More than one-fifth (22%) of the traffic fatalities in the 14-and-younger age group were pedestrians. Of the total traffic fatalities there were 726 pedalcyclists fatalities. Children 14-and-younger accounted for 8 percent (58) of those fatalities.

In 2012, there were 169,000 children 14 and younger injured, which is a 1-percent decrease from 171,000 children injured in 2011.

Source: <http://www-nrd.nhtsa.dot.gov/Pubs/812011.pdf>

In the Russian Federation In 2012 in road accidents 22016 children (aged under 16) were injured and 940 were killed. Specifically, injured children-passengers were 9813, and killed 515.

What is the legal situation in the world?

In Germany, all children younger than 12 years, who are shorter than 150 cm, must be transported in an appropriate CRS, which is approved in accordance with the UN Regulations Nos. 44/03 or 129 or any amendments to these UN Regulations.

Japan: CRSs must be used for child vehicle passengers under the age of 6.

What is the situation in:

EU??

South Africa??

Other countries??

United States: In the U.S., State laws specify how children are to be transported in motor vehicles. Typically, children under a certain age are required to be restrained in a FMVSS No. 213, "Child restraint system" compliant CRS or booster seat. The age at which the child is required to be restrained in a CRS or booster seat varies by State and it typically ranges from 4 to 8 years old. Most States require children that are no longer required to be transported in a CRS or booster seat to use the seat belt. Some States require children under a certain age, which varies by State, to be restrained in the rear seat.

For more specific information on State laws in the U.S. regarding child seat use, see the following summary provided by the Insurance Institute of Highway Safety: <http://www.iihs.org/iihs/topics/laws/safetybeltuse?topicName=Safety%20belts#tableData>.

Russian Federation: Children under 12 years old and shorter than 150 cm must be carried in a child restraint devices in conformity with UN Regulation №44-04.

StVO (German Road Traffic Act) § Section 1a, as of 22 October 2014

"All children younger than 12 years, who are shorter than 150 cm, may only be transported in motor vehicles on seats for which safety belts are prescribed, if CRSs are used which comply with the requirements described in Article 2 Section 1 Letter c of the Council Directive 91/671/EEC of 16 December 1991 on the obligation of using CRSs in motor vehicles (Official Journal EC. No. L 373, P 26), last prepared in Article 1 Section 2 of the Implementing Directive 2014/37/EC on 27 February 2014 (official journal L 59 dated 28.02.2014, P. 32), and which are suitable for the child."

What is the situation in:

Japan??

EU??

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South Africa??

Other countries??

Article 2 Section 1 Letter c of the Council Directive 91/671/EEC of 16 December 1991, last amended by Article 1 Section 2 of the Implementing Directive 2014/37/EU on 27 February 2014

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"(...)

c) where a CRS is used, it shall be approved to the standards of: UN Regulation 44/03 or Directive 77/541/EEC or UN Regulation 129; or any subsequent adaptation thereto. ..."

Russian Federation: Road regulations of the Russian Federation p.22.9 (Government Decree of 14.12.2005 N767): "Transportation of children is allowed on condition of ensuring their safety taking into account features of a design of the vehicle.

Transportation of children up to the age of 12 in vehicles equipped with seat belts, should be carried out with the use of child restraints, corresponding to the weight and growth of the child, or other means allowing to fasten the child by means of the seat belts provided by a vehicle design; as for the front seat - only with the use of child restraints. (as amended. Decree of the Government of the Russian Federation of 10.05.2010 N316)

It is forbidden to transport children under 12 years old in the back seat of motorcycle."

Use and misuse of child restraint systems

The figures of the German Federal Highway Research Institute (BASt) from 2013 show a use of CRS in vehicles in built-up areas at 82 per cent. When looking at children up to an age of five years, this figure is 90 per cent. [Source: BASt; Forschung kompakt 11/14]

What is the situation in:

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United States: According to the the National Child Restraint Use Special Study (NCRUSS) - a nationally representative survey conducted by NHTSA in 2011- observing the use of CRSs and booster seats for child passengers (ages 0-8 years) in 4,167 vehicles, results showed that 94 percent of children were restrained in a CRS or booster seat, 4 percent were restrained in a seat belt, and 2 percent were unrestrained. (Link to NCRUSS report to be provided when report is published).

Russian Federation: According to the survey of All-Russian Public Opinion Research Center (April 2013) Only 51% of respondents use child restraints when transporting children.

Studies on misuse, however, showed that only 35 per cent of these children are secured correctly in the CRS. Incorrect use of the CRSs can drastically reduce the protective capability. [Source: BASt; Report M178; 2006].

United States: According to NCRUSS, the overall CRS and booster seat misuse was 46 percent. The misuse rate was 61 percent for forward-facing CRSs, 49 percent for rear-facing infant CRSs, 44 percent for rear-facing convertible CRSs (CRSs that can be used

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rear facing and forward facing), 24 percent for backless booster seats, and 16 percent for high back booster seats.

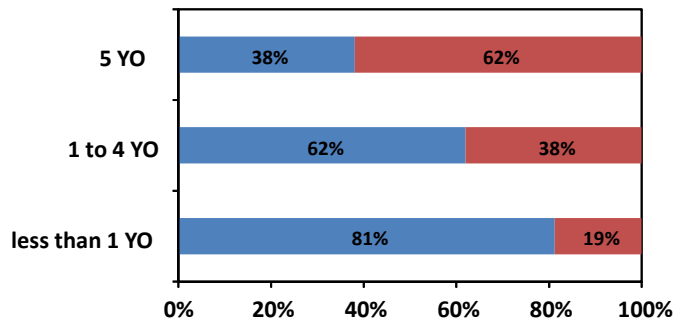
Russian Federation: reliable data are absent

Japan: Current Status on CRS Use (Source: 2013 survey by National Police Agency/JAF)

By age

| | CRS use | CRS non-use |
|----------------|---------|-------------|
| Less than 1 YO | 1386 | 320 |
| 1 to 4 YO | 5506 | 3367 |
| 5 YO | 898 | 1468 |

■ use ■ non-use



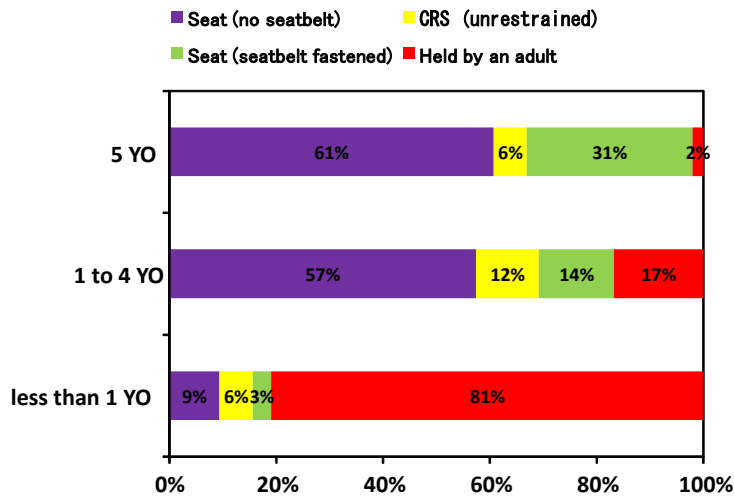
Cases where no CRS was used

| | Seat (no seat belt) | CRS (unrestrained) | Seat (seat belt fastened) | Held by an adult |
|----------------|------------------------|-----------------------|------------------------------|---------------------|
| Less than 1 YO | 30 | 20 | 11 | 259 |
| 1 to 4 YO | 1933 | 397 | 473 | 564 |
| 5 YO | 887 | 91 | 453 | 30 |

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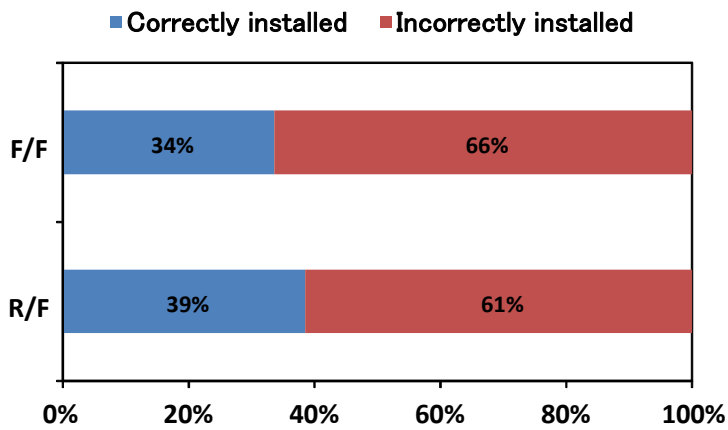
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Misuse

Conditions of CRSs installed in vehicles

| | Correctly installed | Incorrectly installed |
|---------|---------------------|-----------------------|
| R/F CRS | 79 | 126 |
| F/F CRS | 71 | 140 |

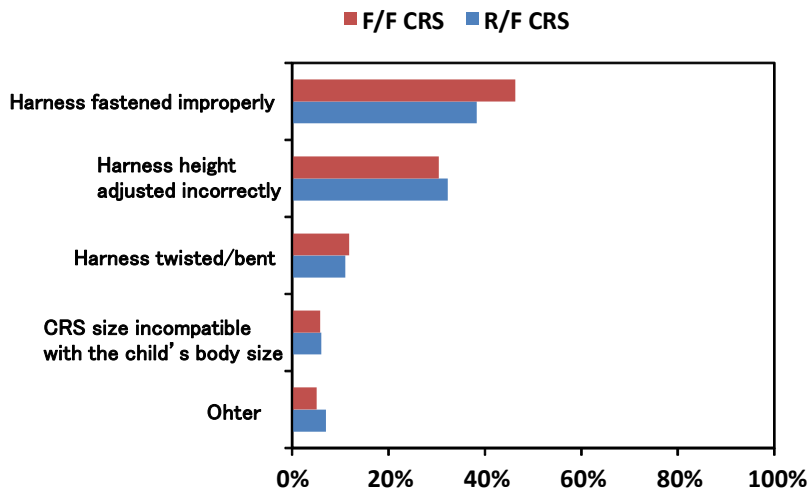


Causes of incorrect usage (F/F & R/F)

| | R/F CRS | F/F CRS |
|-------------------------------------|---------|---------|
| Harness fastened improperly | 38.3 | 46.4 |
| Harness height adjusted incorrectly | 32.3 | 30.5 |

| | | |
|---|-------------|-------------|
| Harness twisted/bent | 11.1 | 11.9 |
| CRS size incompatible with the child's body size | 6.1 | 5.9 |
| Other | 7.1 | 5.1 |

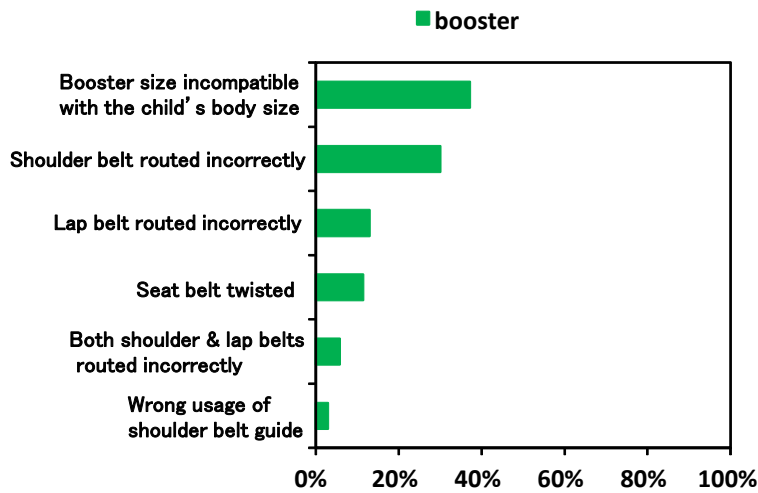
Unit: %; Multiple causes possible; Number of R/F: 99, F/F: 118



Causes of incorrect usage (booster)

| | Booster |
|---|----------------|
| Booster size incompatible with the child's body size | 37.1 |
| Shoulder belt routed incorrectly | 30 |
| Lap belt routed incorrectly | 12.9 |
| Seat belt twisted | 11.4 |
| Both shoulder & lap belts routed incorrectly | 5.7 |
| Wrong usage of shoulder belt guide | 2.9 |

Unit: %; Multiple causes possible; Number of boosters: 70



A step towards the reduction of misuse is the introduction of the IsoFix anchorages. IsoFix is a rigid connection of the CRS and the car via two standardized attachment points. This system facilitates the installation of child seats into the car and reduces potential misuse. In addition, the IsoFix protective system has a further anchoring point in the vehicle to prevent the CRS from rotating. Here, a support leg or a top tether can be used.

Child restraint systems according to UN Regulation No. 44

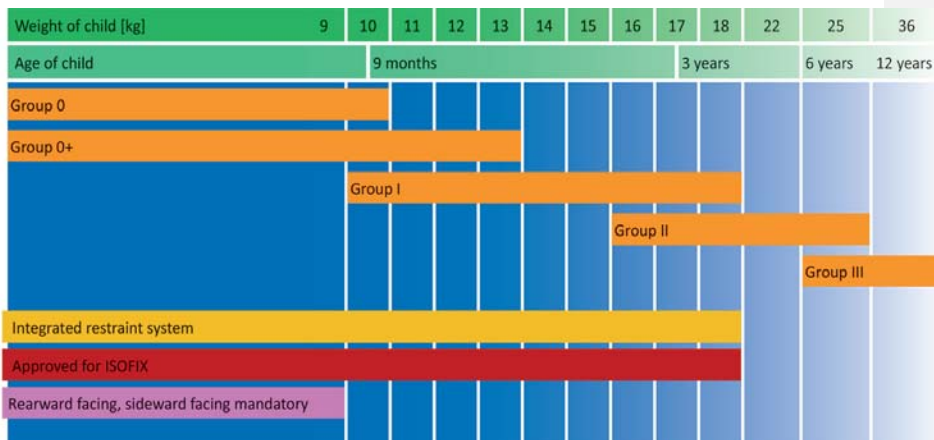
CRSs approved according to UN Regulation No. 44 are divided into five weight groups:

| Group | Weight |
|----------|-------------|
| Group 0 | up to 10 kg |
| Group 0+ | up to 13 kg |
| Group 1 | 9 to 18 kg |
| Group 2 | 15 to 25 kg |
| Group 3 | 22 to 36 kg |

The CRSs of the groups 0 and 0+ must be rearward facing (or lateral as a carry-cot). Group 0+ systems may be used up to a weight of 13 kg.

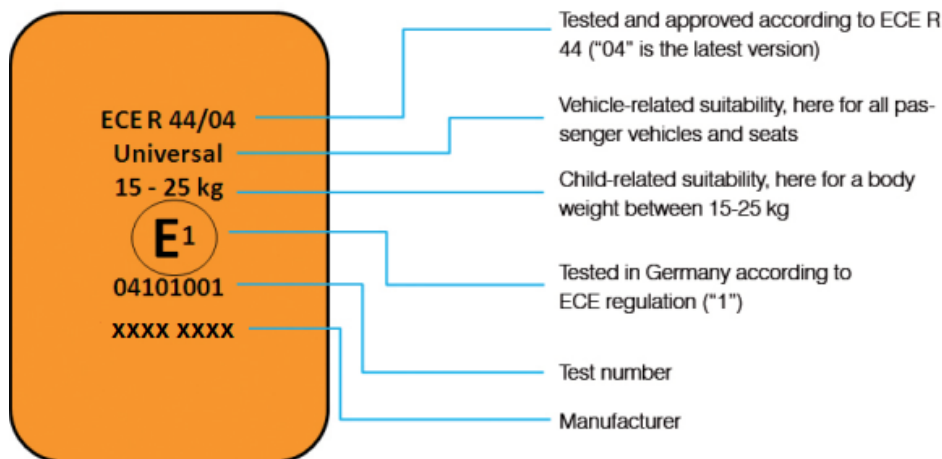
The groups 0, 0+ and 1 have an integrated harness system or (only for group 1) an impact shield, which holds back the child. In the groups 2 and 3, the child is mostly restrained by the safety belt of the vehicle.

IsoFix for the connection of CRSs to the vehicle is approved for groups 0 to 1.



A CRS approved according to UN Regulation No. 44 has a relevant marking. The marking shows the version of the Regulation under which the system was approved (also part of the test number, see the first two digits). Furthermore, it must be indicated for which body weight of the child the CRS is suitable for, the suitability with regard to the vehicle, the country in which the seat was approved as well as the seat manufacturer.

CRSs can be approved universally, i.e. they are suitable for almost all vehicle seats which are approved in accordance with UN Regulations Nos. 14 and 16 (vehicle manual). Semi-universal approved CRSs use (safety) equipment which cannot be used on all vehicle seats. Vehicle-specific CRSs are approved specifically for each vehicle model. For semi-universal and vehicle-specific CRSs, the usability for each seat must be checked by means of the vehicle type list associated with the CRS.



Child restraint systems according to UN Regulation No. 129

Since 09 July 2013, CRSs can be approved in accordance with the new UN Regulation No. 129 for CRSs.

The UN Regulation No. 129 simplifies the use of CRSs to minimize the risk of misuse.

So-called "i-Size" systems are being introduced. An "i-Size" CRS is a universal IsoFix system and is attached in the vehicle using the IsoFix anchorage points. All "i-Size" CRSs can be used on any vehicle seats suitable for "i-Size", which are approved according to UN Regulations Nos. 14 and 16. Either a top tether or a support leg can be used as the third anchoring point. Both systems can be used universally on "i-Size" seats. "i-Size" CRSs and vehicle seats with "i-Size" approval, are marked with the new symbol.



The CRSs are categorized based on size. This means,

that the appropriate CRS is chosen according to the body size of the child. The manufacturer determines the sizes approved for the relevant systems and indicates this on the CRS.

The inner dimensions of the CRS are checked within the framework of the approval according to UN Regulation No. 129, ensuring usability across the entire designated size range.

In addition to the size range, a maximum weight is indicated, up to which the CRS can be used. This way, it is ensured that all safety-relevant components, also vehicle components, are dimensioned for the total weight of the child and CRS.

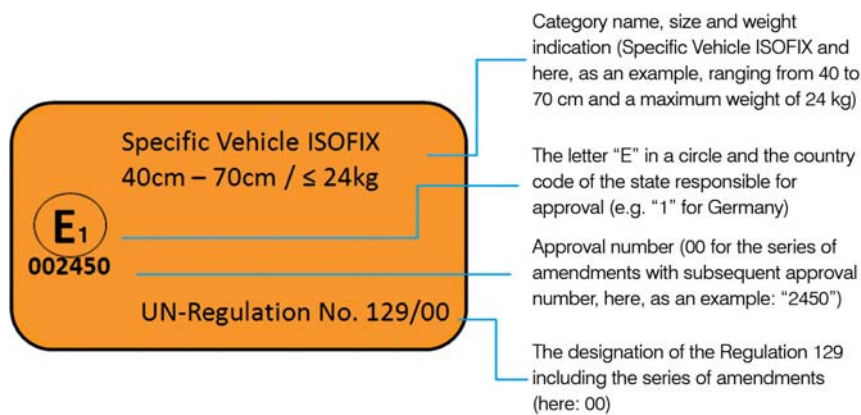
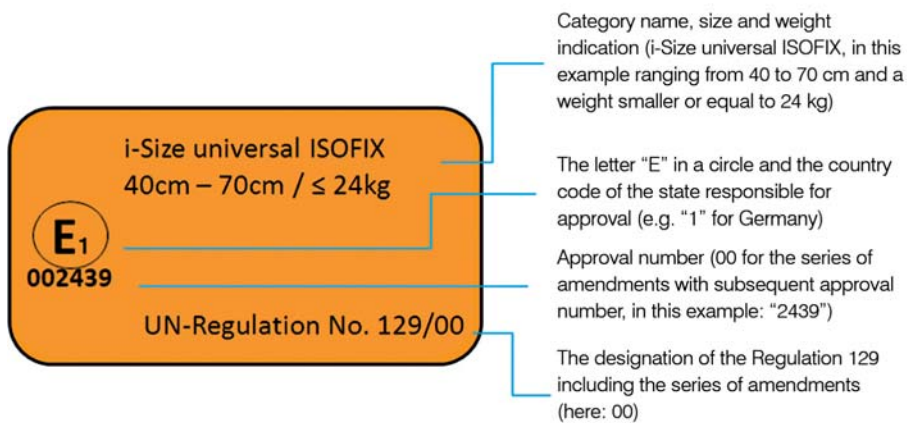
This classification simplifies the choice of a suitable CRS and reduces the danger of a too soon change to subsequent systems.



Children under the age of 15 months must be transported facing rearwards or sideways in seats that are approved according to UN Regulation No. 129. This takes into account the special required protection of the head and neck of babies and toddlers and a too soon change to forward-facing systems is restricted. In addition, the passive safety was improved in UN Regulation No. 129. A dynamic test for side impact is now required for the approval of CRSs.

In addition to an approval as an "i-Size" universal IsoFix CRS, the UN Regulation No. 129 also offers the option of a vehicle-specific approval. Here, the usability for each seat must be checked by means of the vehicle type list associated with the CRS. This approval is specifically required for CRSs that do not fit in the prescribed space for universal CRSs, for example, larger rearward facing systems.

A CRS approved according to UN Regulation No. 129 has a respective marking. In addition to the "i-Size" symbol, universal IsoFix CRSs have a marking attached on the CRS, which must contain at least the following information:



Usability of child restraint systems

- CRSs can be approved according to UN Regulation No. 44 or UN Regulation No. 129. CRSs that are approved according to UN Regulation No. 44/03 and subsequent amendments can still be used.
- Phase 1 of the UN Regulation No. 129 which has come into force by now, only applies to integrated IsoFix CRSs, meaning those, which are equipped with its own harness system or an impact shield for restraining the child. CRSs which are installed with

vehicle safety belts or where the child is restrained by means of the vehicle safety belts, are currently not included in UN Regulation No. 129.

- "i-Size" CRSs can always be used on "i-Size" vehicle seats.
- To use an "i-Size" CRS on an IsoFix vehicle seat, approval from the manufacturer is required. Please see the additional information of the CRS for this approval.
- If necessary, the current vehicle list of the CRS must be considered, as is the case for semi-universal CRSs according to UN Regulation No. 44. The vehicle list contains the vehicle makes in which the CRS can be used and specifies which IsoFix vehicle seats the CRS can be used on.
- IsoFix CRSs may be used, in accordance with the information in the vehicle manual, on seats that are marked with "i-Size". For CRS with semi-universal or vehicle-specific approval, the current vehicle list of the CRS must be considered.

Entry into force of UN Regulation No. 129

On 9 July 2013 the new UN Regulation No. 129 (i-Size) entered into force. Since this date, 50 countries worldwide, including all EU countries, Japan, Russian Federation and South Africa, have transposed this new regulation into their national legislations. The complete list of countries applying UN Regulation No. 129 can be consulted on document ECE/TRANS/WP.29/343/Rev.23, showing the status of the 1958 UN Agreement and countries applying the annexed UN Regulations (amongst other UN Regulation No. 129). The document is available under this link:

<http://www.unece.org/fileadmin/DAM/trans/main/wp29/wp29regs/ECE-TRANS-WP.29-343-Rev.23.pdf>

The content of the UN Regulations No. 129 (i-Size) is freely available at the WP.29 website:

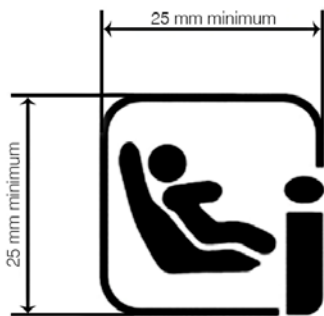
<http://www.unece.org/trans/main/wp29/wp29regs121-140.html>

Questions and answers about the new UN Regulation on child restraint systems

1) What is i-Size?

Since 09.07.2013, CRSs can be approved in accordance with the new UN Regulation No. 129 for CRSs. The new UN Regulation simplifies the application of CRSs, in order to minimise the risk of danger due to incorrect use. So-called universal IsoFix systems (named: "i-Size") are being introduced. All "i-Size" CRSs can be used on any vehicle seats suitable for "i-Size". "i-Size" CRSs with support legs can also be used universally on all "i-Size" seats.

"i-Size" CRS and vehicle seats approved for "i-Size" are marked with the new symbol.



In addition to the simplified use of the CRSs, the passive safety has also been improved. Furthermore, a new size-based categorisation of the CRSs was performed, which simplifies the choice of an appropriate CRS.

2) What is the difference between the UN Regulation No. 44 and the new UN Regulation No. 129?

CRS are no longer categorised by weight groups, as is the case under UN Regulation No. 44. The weight group categorisation partially overlapped and experience showed that this resulted in CRSs being changed to the next group too early. The categorisation of CRSs in the UN Regulation No. 129 is no longer only based on the weight of the child, as in UN Regulation No. 44, but based on the size of the child in cm and the maximum weight, the child may have. The manufacturer displays this information on the seat.

When using CRSs according to the new regulation, children under the age of 15 months must in future be transported in rearward facing systems. This is also to prevent a too early change to forward-facing systems and in particular, to increase the protection of the head and neck.

In addition UN Regulation No. 129 requires a dynamic test for side impact. Under UN Regulation No. 44, the side impact is not tested dynamically.

Table of the main differences between UN Regulation No. 129 and UN Regulation No. 44

| <i>Regulation No. 129</i> | <i>Regulation No. 44</i> | <i>Regulation 129</i> |
|--|--|--|
| <i>i-Size Check List</i> | | |
| 1. Improved protection for side & front impact and a much better protection of head & neck | Front impact 50 km/h – 21-28 G Rear impact 30km/h 14-21 G No side impact | <ul style="list-style-type: none"> ▪ Front impact 50 km/hr – 21-28 G, more demanding criteria ▪ Rear impact 30 km/hr 14-21 G ▪ Side impact: 24 km/hr start 13-15 G with an intruding door |
| 2. Rearward facing travelling mandatory up to 15 months old | Forward facing possible from 9kg (approx. 9 months) | <ul style="list-style-type: none"> ▪ Label on forward facing product: no FF before 15 months |
| 3. R129 i-Size also promotes Isofix, which has less chance of being incorrectly used than belted car seats | ISOFIX, belt or combination All age classes | <ul style="list-style-type: none"> ▪ Regulation No. 129 Phase 1 i-Size: ISOFIX only & birth to 105cm (can go above 105cm as well) |

Regulation No. 129

i-Size Check List

Regulation No. 44

Regulation 129

4. All i-Size car seats and most Isofix car seats will fit in new cars with i-Size seating positions

1. Universal (top tether)
2. Semi Universal (support leg)
3. Car specific

- Universal (Support leg or top tether)
- Car specific

5. Classification of CRSs

Group 0 – 0+, 0+/1, 1/1-2-3, 2-3 according to child's weight

- No groups:
- Classification based on stature
 - Centimeters based
 - Max. occupant mass
-

3) Are child restraint systems that conform to the new regulation, safer?

The new regulation simplifies the application of CRSs.

CRSs in accordance with UN Regulation No. 129 offer a higher level of safety than systems in accordance with UN Regulation No. 44.

4) How do I recognize a CRS that is approved according to UN Regulation No. 129?

CRSs in compliance with UN Regulation No. 129 can be recognized by the approval mark, which must be attached to the CRS.

Examples for approval marks in accordance with UN Regulation No. 129:

Example 1



- The letter "E" in a circle and the country code of the state responsible for approval (e.g. "1" for Germany)
- An approval number (00 for the series of amendments with subsequent approval number, in this example: "2439")
- The designation of the UN Regulation No. 129 including the series of amendments (here: 00)
- The category name, the size and weight indication. (i-Size universal ISOFIX and here, as an example, ranging from 40 to 70 cm and a maximum weight of 24 kg)

Example 2



- The letter "E" in a circle and the country code of the state responsible for approval (e.g. "1" for Germany)
- An approval number (00 for the series of amendments with subsequent approval number, here, as an example: "2450")
- The designation of the UN Regulation No. 129 including the series of amendments (here: 00)
- The category name, the size and weight indication (Specific Vehicle ISOFIX and here, as an example, ranging from 40 to 70 cm and a maximum weight of 24 kg)
- Children's seats which are approved as "i-Size universal ISOFIX" (example 1) are additionally marked with an "i-Size" symbol. "Specific Vehicle ISOFIX" seats (example 2) are approved for use in certain vehicles. Here, the vehicle list associated with the CRS must be observed.

5) Is a double marking of a seat according to UN Regulation Nos. 44 and 129 allowed?

A double marking is not allowed. A CRS must be approved either in accordance with UN Regulations Nos. 44 or 129 and be marked respectively.

6) In future, are child restraint systems manufacturers bound to the i-Size regulation of UN Regulation No. 129?

This depends on the manufacturer's strategy. It is assumed that vehicle-specific seats will come onto the market also in future, as not every vehicle seat is suitable for "i-Size" and therefore, no "i-Size" marking can be used.

7) Can i-Size child restraint systems only be used on i-Size vehicle seats?

If, in the future, the vehicle is equipped with "i-Size" seats, then the CRS is suitable for use on the "i-Size" seats in the vehicle. Generally, CRSs marked with the "i-Size" symbol may only be used on vehicle seats if these are also marked with the "i-Size" symbol. However, manufacturers of CRSs can approve their products marked with the "i-Size" symbol for use on other vehicle seats if they are equipped with IsoFix. Please see the additional car manufacturers' information to determine whether a special CRS is suitable for the provided IsoFix seat. This information should be available on the owner book of the vehicle. However, also CRS manufacturers could provide a current vehicle list where a CRS with support leg on an IsoFix seat can be used. The problem only applies to "old" vehicles, however, will also occur in new vehicles, as not all seat positions can be marked as "i-Size".

8) Can an IsoFIX child restraint system be used on an "i-Size" seat?

IsoFix CRSs may be used, in accordance with the information in the vehicle manual, on seats that are marked with "i-Size". For semi-universal seats please adhere to the manufacturer's vehicle type list.

9) What must I take into account when purchasing the correct "i-Size" CRS?

Manufacturers indicate the child size range, in centimetres, on the CRS for which the seat is suitable. In addition, the maximum weight for use of the seat is also indicated here. In a vehicle with "i-Size" seats, any type of "i-Size" CRS can be used. If the CRS manufacturer has approved the use of the "i-Size" seat for certain vehicle seats with IsoFix marking, then the CRS can be used like an approved system under UN Regulation No. 44, i.e. according to the specifications in the vehicle manual.

10) Why are child restraint systems categorized by size and weight?

CRSs are categorized by size of the child to make it easier for parents to choose the correct CRS. Parents often rather know the size of the child than the weight. A review of the inner dimensions and the belt adjustment options in the new UN Regulation No. 129 ensures that the product can be used for the specified size range. The maximum weight of the child, up to which the CRS can be used, ensures that all safety-relevant components, including vehicle safety-relevant components are dimensioned according to the total weight of the child and CRS. The categorization also reduces the number of too early changes to a new system.

11) Why do children under the age of 15 months have to be transported rearward facing?

When using CRSs according to the new regulation, children under the age of 15 months must in future be transported in rearward facing or side-facing systems.

The weak neck muscles of toddlers in combination with a large head in relation to the body size, requires special protection of the head and neck. For this reason, the new regulation includes an age limit up to which children must be transported at least rearward facing or side-facing.

12) When did the new Regulation come into force and when will the "i-Size" seats be available in vehicles?

The new UN Regulation No. 129 for CRSs came into force on 09 July 2013. Since mid 2013, vehicle manufacturers can also approve vehicle seats as "i-Size" seat positions. The first vehicles with seats marked as "i-Size" already came onto the market in 2014.

13) Is it possible to mark different seats with IsoFIX and "i-Size" in one vehicle?

Different markings are possible in a vehicle, if the space conditions are not met for all seats in the vehicle for approval as an "i-Size" seat.

14) Is a vehicle-specific approval for child restraint systems still possible?

Particularly in smaller vehicles it is not always possible to offer the "i-Size" marking for all seats, due to insufficient installation space. The German Federal Ministry of Transport and Digital Infrastructure (BMVI) will make certain, also in the future, that smaller vehicle models are not excluded from the possibility of using CRSs.

What is the situation in:

15) Can I continue using child restraint systems that are approved according to UN Regulation No. 44/03 or 04?

The previous CRS regulation (UN Regulation No. 44) remains in force and all "old" CRSs in accordance with UN Regulation No. 44 (series of amendments 03 and subsequent amendments) may still be used. Purchasing new CRSs in accordance with UN Regulation No. 44 is permitted.

16) In future, are both regulations (UN Regulations Nos. 44 and 129) valid in parallel?

Yes, both regulations are currently valid in parallel. Currently, the UN Regulation No. 129 only includes integrated IsoFix CRSs, meaning those, which are equipped with own harness systems or an impact shield for restraining the child.

Following a transition phase, in which the UN Regulation No. 44 will be revised, IsoFix CRSs will only be approved in accordance with the new UN Regulation No. 129. CRSs that are fixed with vehicle safety belts or where the restraint of the child takes place with the vehicle safety belts are not yet included in the UN Regulation No. 129. Requirements for these non-integrated CRSs, where the child is restrained by the vehicle safety belt, are currently being developed by the UN Economic Commission for Europe (UNECE) for the new regulation. The procedure for CRSs with integrated restraint systems, which are not fixed by IsoFix, but with the vehicle seatbelt, will be determined at a later point in time.

17) Is there a uniform communication strategy with regard to the approval of child restraint systems in accordance with UN Regulations Nos. 44 and 129 ? How are insecurities among consumers being avoided with different instructions in the relevant manuals?

[The German Federal Highway Research Institute (BASt) has published an information brochure about CRSs for consumers].

In addition, the communication strategy is set by the individual manufacturers. The operating instructions also provide information for consumers. Clear information should be available in the relevant vehicle and CRS manuals. This of course requires communication between car manufacturers and child seat manufacturers.

What is the situation in:

EU??

South Africa??

Other countries??

Japan : With regard to the situation in Japan, Japanese government is not providing the information right now but is now reviewing the timing of providing it.

United States: Does not apply as only Federal Motor Vehicle Safety Standard No. 213,"Child restraint systems", compliant CRSs can be sold and used in the United States.

Russian Federation: The use and installation of child restraints is allowed only in strict accordance with the operating manual for the vehicle and the operating instructions for the child restraint.

18) Are "i-Size" child restraint systems available for all age groups?

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Currently, only CRSs with integrated belt systems can be approved on the basis of UN Regulation No. 129. The use of "i-Size" CRSs is restricted by prescribed maximum dimensions and compliance with the total weight of the child and the CRS. The approval as a "Specific Vehicle ISOFIX" seat allows exceeding the maximum dimensions e.g. for large rearward facing CRSs, whereby the requirements for passive safety of the UN Regulation No. 129 remain binding. The requirements for CRSs without own integral harness system for older children are currently being reworked within the framework of the UN Regulation No. 129.

19) Are the new child restraint systems permitted for use worldwide?

Yes, according to § 21 Section 1a of the German Road Traffic Act (StVO), CRSs according to the UN Regulation No. 44 and the new UN Regulation No. 129 are permitted. Due to the easier handling and improved protective effect, the BMVI recommends the use of CRSs in accordance with the new UN Regulation No. 129.

What is the situation in:

EU??

South Africa??

Other countries??

Japan : Yes, CRSs according to the UN Regulation No. 44 and the new UN Regulation No. 129 are permitted.

United States: All CRSs sold in the United States must be compliant to FMVSS No. 213. UN Regulation No. 44 and/or No. 129 compliant CRSs that are not compliant to FMVSS No. 213 are not permitted for sale and use in the United States.

Russian Federation: Currently, in accordance with the Technical Regulations of the Customs Union (TR CU 018/2011) child restraints must meet the requirements of the UN Regulations №44-04.»

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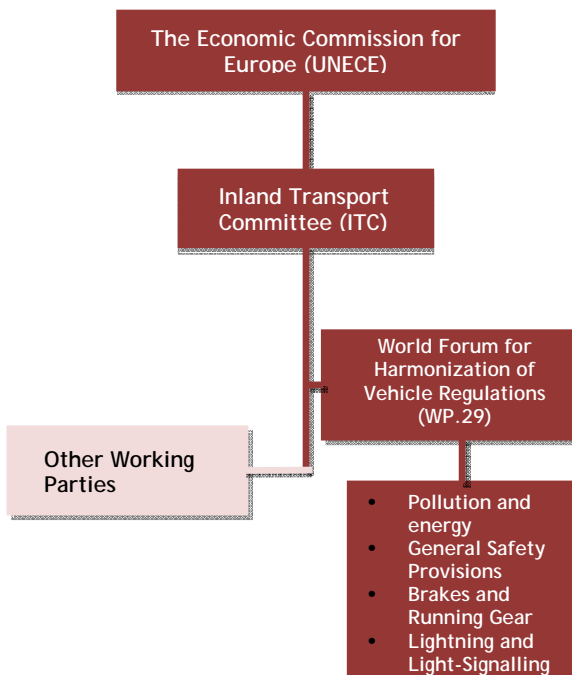
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Glossary

"**Child Restraint System**" (CRS) means a device capable of accommodating a child occupant in a sitting or supine position. It is so designed as to diminish the risk of injury to the wearer, in the event of a collision or of abrupt deceleration of the vehicle, by limiting the mobility of the child's body. It is popularly known as vehicle child seat.

"**World Forum for Harmonization of Vehicle Regulations (WP.29)**" was established on 6 June 1952 as the Working Party on the Construction of Vehicles, a subsidiary body of the Inland Transport Committee (ITC) of the United Nations Economic Commission for Europe (UNECE). In March 2000, WP.29 became the "World Forum for Harmonization of Vehicle Regulations (WP.29)". The objective of the WP.29 is to initiate and pursue actions aimed at the worldwide harmonization or development of technical regulations for vehicles. Providing uniform conditions for periodical technical inspections and strengthening economic relations worldwide, these regulations are aimed at:

- improving vehicle safety;
- protecting the environment;
- promoting energy efficiency and
- increasing anti-theft performance.



"**Working Party on Passive Safety (GRSP)**" Subsidiary body of the World Forum, which is responsible for the up-date of the existing requirements with regard of passive safety ,and amongst others those of Regulations No. 44 and 129 (see also the reports and working documents at the homepage address: <http://www.unece.org/trans/main/wp29/wp29wgs/wp29grsp/grspage.html>).

"**UN 1958 Agreement**" concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled

Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these Prescriptions; the Agreement counts 53 Contracting Parties (UN Countries) world wide and 134 annexed **UN Regulations**. Whenever a company designs a prototype of an automotive component, accessory or vehicle they must prove that it meets the performance requirements of the 1958 Agreement's Regulations. Once that is done, the manufacturer can follow the motto "certified once, sold everywhere." That company engraves the E on their parts, and a car maker in any country can buy it with the confidence that it meets the Regulations. Companies can trade across borders and to different regions without a costly re-verification process which would be passed on to the consumer.

UN Regulations, can be consulted on-line at or downloaded free of charge from the following website:

<http://www.unece.org/trans/main/welcwp29.htm>

"**i-Size**" (Integral Universal ISOFIX Child Restraint Systems) is a category of Child Restraint System for use in all i-Size seating position of a vehicle, as defined and approved according to Regulation Nos. 14 (Safety-belt anchorages) and 16 (Safety-belts).

"**Integral**" is a class of Child Restraint System, meaning that the child is restrained only by components which comprise the Child Restraint System (e.g. strap harness, shield, etc.), and not by means connected directly to the vehicle (e.g. seat belt).

"**ISOFIX**" is a system that provides a method of connecting a Child Restraint System to a vehicle. It is based on two vehicle anchorages and two corresponding attachments on the Child Restraint System in conjunction with a means to limit the pitch rotation of the Child Restraint System. All three vehicle anchorages are to be approved according to UN Regulation No. 14.

"**ISOFIX Universal**" is an ISOFIX comprising either a top-tether or a support-leg, to limit the pitch rotation of the Child Restraint System, attached to, or supported by, the corresponding vehicle.

"**ISOFIX anchorage system**" means a system made up of two ISOFIX low anchorages fulfilling the requirements of UN Regulation No. 14 which is designed for attaching an ISOFIX Child Restraint System in conjunction with an anti-rotation device.

"**ISOFIX low anchorage**" means one 6 mm diameter rigid round horizontal bar, extending from vehicle or seat structure to accept and restrain an ISOFIX Child Restraint System with ISOFIX attachments.

"**Support-leg**" means an anti-rotation device permanently attached to a Child Restraint System creating a load path between the Child Restraint System and the vehicle structure. A support-leg shall be adjustable in length (Z direction) and may be additionally adjustable in other directions.

"**UN Regulation No. 44**" lists technical testing provisions to ensure the high safety performance of components used for child restraints. These provisions regulate factors such as flammability, the tensile strength of materials, straps, fixing points and markings and most importantly provide specifications for the positioning of the child's body in the car seat. This is essential for preventing the child's head from coming into contact with the car's interior during a crash.

"**ECE/TRANS/WP.29/343/Rev.xx**" currently updated by UNECE/WP.29 secretariat at its at Revision 3, is the complete **status** of the 1958 Agreement provides full information concerning **list of Contracting Parties applying a Regulation** and its amendments, listing the titles of all 134 UNECE Regulations, amongst other UN Regulations Nos. 44 and 129, as well as the date of entering into force of each amendment adopted, the Contracting Parties (C.P.) to the Agreement and for each individual Regulations **a list of C.P. applying**

that Regulation, giving the addresses of their Administrative Departments that grant the approvals and the Technical Services that carry out the testing and issue the test reports. It's available free of charge at the following website:

<http://www.unece.org/trans/main/wp29/wp29wgs/wp29gen/wp29fdocstts.html>

Acknowledgement

The realization of the brochure was supported by: (i) the German Federal Ministry of Transport and Digital Infrastructure and the Federal Highway Research Institute (BAST) who contributed main parts of the brochure, (ii) European Association for the Co-ordination of Consumer Representation in Standardisation (ANEC) and (iii) European Association of Automotive Suppliers (CLEPA).

II. Justification

1. Since its May 2013 session, GRSP agreed on the importance of coordinated information campaigns (e.g. brochures and videos) to promote the new UN Regulation No. 129 and encouraged sharing information on modality and planning of these initiatives and agreed to resume consideration of this subject at its further sessions on the basis of a draft proposal of brochure text (see ECE/TRANS/WP.29/GRSP/53, para 46).

2. Finally, at its December 2014 session GRSP considered GRSP-56-24 Rev.1 and GRSP-56-27 as a basis for the drafting of the brochure. In the same session the German Federal Ministry of Transport and Digital Infrastructure and the Federal Highway Research Institute (BAST), informally offered to the Secretariat a substantial contribution for drafting the brochure, on the basis of a similar brochure they designed. This at the aim of providing harmonized information to consumers.

3. The current proposal is the result of these coordinated efforts. However, it needs further contribution especially from non-European Contracting Parties to tailor the contents of the brochure (i.e. yellow shaded parts) with concerns, statistical data of worldwide geographical areas. The Secretariat encourages this worldwide contribution in view of the endorsement of GRSP of this draft at its May 2015 session, according to the tight deadline to cover the publication expenses with the UNECE budget by summer 2015.

4. In the same time the above draft is submitted to the May 2015 session of GRSG to gather possible comments on matters related to the transportation of children on buses.
