

**Minutes for 60<sup>th</sup> meeting of the Informal Group on  
Child Restraint System**

Date:	<b>Start</b>	<b>September 13<sup>nd</sup></b>	<b>09:00 AM</b>
	<b>End</b>	<b>September 13<sup>nd</sup></b>	<b>04:30 PM</b>

Place:

**Bast offices  
Bruederstraße 53  
D-51427 Bergisch Gladbach  
Tel. : +49 2204 43-0**

1. Welcome and Roll call ([CRS-60-10e](#))
2. Adoption of the revised agenda ([CRS-60-01e Rev1](#))
3. Validation of the minutes of the last meeting ([CRS-59-17e](#))

Minutes of the last meeting were validated without remarks & modifications

4. Validation of amendments of Reg. No 14 & 16

Presentation ([CRS-60-03e](#)) is about the regulation No 16 presented by Irina DAUSSE (RENAULT) on behalf of OICA. In blue colour it's text already approved by the GRSP & in red it's a new proposal. According to Pierre CASTAING (UTAC & Chairman, the best way is to send this document as an supplement to be added in fast track for the next GRSP in December.

- Modification of the “size classes” for “size envelopes” and addition of “booster seat” fixture in the definition of child restraint fixture (§2.38).
- Integration of the “booster seat fixture ISO/B2” for the i-Size seating position definition (§8.3.6).
- Additional information & details are given for the Isofix attachments for the requirement in §3.1 of the Annex 17 – Appendix 2.
- Modification of the “size classes” for “size envelopes” in §4 of the Annex 17 – Appendix 2, Modification of the CRF mass & tolerance. Specification is also added on the centre of gravity of the CRF.
- Modification of some keys for some envelopes
- Annex 17 – Appendix 5 is added on the provisions concerning the installation of forward facing booster seat child restraint systems of universal and specific categories installed on vehicle seating positions or i-Size seating positions.

⇒ Action for CLEPA + OICA: please check until December GRSP if R2X gabarit could be an alternative to R2 gabarit for the i-Size position.

Presentation ([CRS-60-04e](#)) is about the regulation No 14 presented by Irina DAUSSE

(RENAULT) on behalf of OICA. In blue it's a new proposal.

The document ([CRS-60-13e](#)) is the proposal for supplement 7 to the 07 series of Amendments to Regulation No. 14 (Safety belt anchorages).

The document ([CRS-60-14e](#)) is the proposal for supplement 9 to the 06 series of Amendments to Regulation No. 16 (Safety belt) and supplement 1 to the 07 series of amendments.

## 5. Work on phase III

### 5.1. Feedback from workshops (Sebastian WEBER)

Sebastian WEBER (AUDI) shows to the group the document ([CRS-60-11e](#)) as result from the workshop at BASt on the September 12<sup>th</sup>. All pictures under “zip” format are available on five different folders :

[CRS-60-12e Part 1](#) for pictures on ECE E129 sled

[CRS-60-12e Part 2](#) for pictures on Ford Turneo Custom

[CRS-60-12e Part 3](#) for pictures on Hyundai Tucson

[CRS-60-12e Part 4](#) for Opel Astra

[CRS-60-12e Part 5](#) for Volvo S90

The open topics ~~are split in two~~ :

- For the vehicle side :
  - Belt length [using Group 0+ CRS & measured by using universal R16 gabarit](#)
  - Buckle to CRS contact => [ok with universal gabarit](#)
  - Combination [R16 gabarit](#) and belted [CRS+](#) support leg requirements
  - Lower tether attachments => [Sweden style for rearward CRSs, vehicle specific in R129 \(and semi-universal in R44\).](#)
- For the CRS side :
  - Belt length [measured in the vehicle and on the test bench](#)
  - belt path [on CRS and R16 universal gabarit, \(regarding misuse on different CRS, area for vehicle buckle\).](#)
  - New definition of universal belted / vehicle specific
  - Support leg compatibility

### 5.2. Installation Procedure

Item not discussed

### 5.3. Modification of fixtures for buckle access

Item not discussed

6. Proposal of amendment of phases I and II (if documents available before the meeting)

Pierre CASTAING (UTAC & Chairman) shows to the group the document ([CRS-60-02e](#)) with underling in yellow items with open discussion. The version modified during the meeting is available under reference ([CRS-60-02e V2](#))

Based on this consolidated document a proposal of supplement 2 to the 01 series of amendment to Regulation No 129 and also a proposal for a supplement 2 to the 02 series of amendment of Regulation No 129 must be sent to the GRSP secretariat as formal documents. (CRS-60-xxe and CRS-60-yye)

These proposals are aimed adding the same clarifications and editorial corrections to the text of the 01 and 02 series of amendments to the UN Regulation No 129.

6.1. Integral ECRS with Shield systems

Item not discussed

6.2. UMTRI installation procedure and belt positioning

The document ([CRS-60-07e](#)) presented by Yoshinori TANAKA (NTSEL) is about test results of UMTRI seating procedure. The purpose was to compare the test results between the current seating procedure of the R129 regulation and the UMTRI seating procedure in the R129 test condition. Tests were performed with the Q6 dummy without abdominal sensor, and without hip liner. Test results are the following:

	unit	R129	UMTRI
<b>Head excursion</b>	mm	404	389
<b>Head acceleration (3m)</b>	G	68	67
<b>Upper neck tension force(Fz)</b>	N	1979	1976
<b>Upper neck flexion moment(MY)</b>	Nm	50	52
<b>Chest acceleration (3ms)</b>	G	40	41
<b>Chest Deflection</b>	mm	25	23

According to the Japan Current research, injury measures are almost similar.

In reaction of the previous presentation, Dinos VISVIKIS (CYBEX) on behalf of CLEPA shows the presentation ([CRS-60-08e](#)) on the validation of the UMTRI seating procedure.

Tests were performed with the Q3 & Q10 dummy (equipped with HUMANETICS hip liner and APTS sensors) on two different booster seats.

Dummy	Seating procedure	Booster seat	Belt in abdomen	Pressure L (bar)	Pressure R (bar)	Dummy	Booster seat	Seating procedure	Hor. head exc.	Res. head acc. 3ms (g)	Res. Chest acc. 3ms (g)
Q3	R129	Good	No	0.33	0.23	Q3	Good	R129	374	79.6	44.7
		Poor	No	0.22	0.24			UMTRI	387	76.0	52.5
	UMTRI	Good	No	0.35	0.23		Poor	R129	338	67.1	43.0
		Poor	No	0.28	0.26			UMTRI	360	71.9	53.8
Q10	R129	Good	No	0.97	0.48	Q10	Good	R129	395	71.1	38.6
		Poor	No	0.70	0.36			UMTRI	426	99.1	45.7
	UMTRI	Good	No	0.69	0.38		Poor	R129	392	89.8	40.5
		Poor	No	0.34	0.34			UMTRI	375	92.4	40.9

According to the previous test results, R129 did not discriminate differences in abdomen protection afforded by two booster seats. No added value of UMTRI seating procedure in assessing abdomen protection. UMTRI procedure tended to increase measurements in regulated body regions. UMTRI procedure delivered mostly repeatable results.

For Pierre CASTAING (UTAC & Chairman), it's important to always use last version of Q serial dummy (including APTS & lip liner) which will be available soon on the UNECE website. We have to wait that all sensors & hip liner are available and then we will start a new large test session in order to take a decision about the UMTRI seating procedure.



### 6.3. Increased Pulse

Item not discussed

## 6.4. Q10 by Mark PITCHER (TRL)

In the document ([CRS-60-09e](#)), Mark PITCHER (TRL) shows the comparison on one test (in R129 test environment) with the Q10 dummy on a booster seat with two different hip liner.

The first version of the hip liner is a DOREL version and the second comes from HUMANETICS. The next tables shows test results.

	Hip liner from DOREL	Hip liner from HUMANETICS
<b>Pictures</b>		
<b>Left abdominal pressure</b>	1.32 bar	1.29 bar
<b>right abdominal pressure</b>	1.40 bar	0.59 bar
<b>Lap belt penetration</b>	Yes	Yes (but less than other test)
<b>Comments</b>	-	Hip liner remains stable

As a comment, Paul LEMMEN (HUMANETICS) inform the group that the geometry for the Q3, Q6 & Q10 hip liner are defined. First test results on the Q3 does not shows improvement in term of submarining then a new version is made with higher shore but with same geometry.

The package drawing (including lip liner, APTS sensors...) is now available and will be place on the UNECE website soon.

#### 6.5. Fixtures by Hans AMMERLAAN ([CRS-60-05e](#))

This document from Hans AMMERLAAN (RDW) present a booster proposed to RDW for this approval. It's a "flat & foldable" booster seat which does not lift the child but it uses webbing guides to rout the lap safety belt and uses an adjustable strap with a clip to guide the diagonal safety belt.



The encountered problems are about :

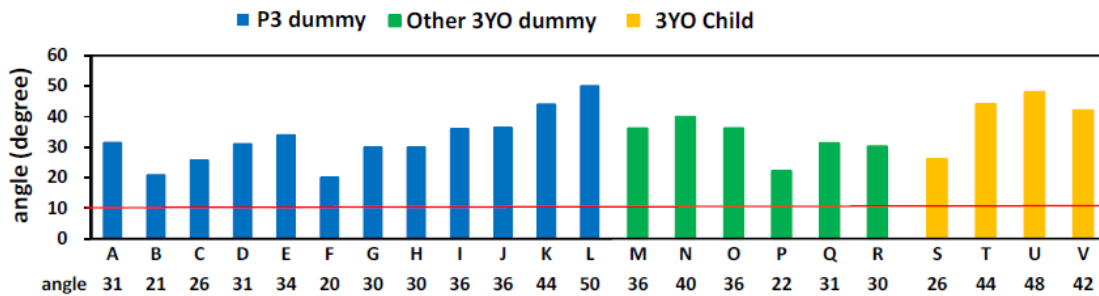
- The main load bearing point
- Transmitting of loads through the pelvis
- Lie of belts completely different from that of the test trolley
- Being foldable

Hans AMMERLAAN would like to avoid this kind of the product in the R129 and also in the R44 regulation. Pierre CASTAING (UTAC & Chairman) inform the group that if this product was presented at UTAC for his approval it will be failed too.

According to François RENAUDIN (DOREL) with all current performance criteria (as abdominal pressure), this product cannot pass the R129 limit.

## 6.6. Presentation by Japan

The first document ([CRS-60-06e](#)) presented by Yoshinori TANAKA (NTSEL) is about the lap strap angle of CRS and revised proposal to the document [ECE/TRANS/WP.29/GRSP/2016/14](#). Japan researched the lap strap angles of the booster seats or cushions on 22 products available in Japan. The conditions of measurement was on a R44 test bench, on a vehicle or on a seat jig, with a 3 years old dummy (P serial & other) & child. The measure was performed on the front edge of the lap belt. The next table show the results :



All booster seats and cushions meet the 10° criterion (the smallest angle was 20°). Japan basically supports the Netherlands' proposal but would like to change the criterion to "0°".

Hans AMMERLAAN (RDW) & Ronald VROMAN (ANEC) prefer to keep the limit at 10° and does not want to change for 0°.

François RENAUDIN (DOREL) is asking the question what is the problem that we want to solve ?

## 7. Phase-out of regulation R44 ISOFIX

Item not discussed

## 8. Next meetings

8.1. 61th meeting will be on the 19<sup>th</sup> October, CLEPA – Brussel; 9.30am-17:00pm

8.2. 62th meeting will be on the 22<sup>th</sup> November, OICA – Paris; 9.30am-17:00pm



## 9. A.O.B.

## 9.1. P0 by Paul LEMMEN

Paul LEMMEN (HUMANETICS) inform the group that there is lots of demand for P0 from labs. As there is some difficulties to have correct material for this dummy, HUMANETICS will stop the production of the P0. Paul LEMMEN propose to use the Q0 instead of the P0 in the R44 regulation.

Ronald VROMAN (ANEC) says that now P dummies will not be use in the R129 regulation and then this serial will disappear progressively.

Yoann BRUNETIERE (DOREL) remains that of course P dummy are not use for the R129 regulation, more and more project will be according to the R129 regulation but we still have some R44 car seats in production and we have to perform Conformity Of production then with P serial dummy.

Marianne HYND (Newell Rubber Maid) inform also that we will have different test results if we will use Q dummies instead of P dummies and then can affect the production of the CRS.

Pierre CASTAING (UTAC & Chairman) propose to ask to Geneva an alternative of the P0 (Q0, EuroSid,...).

Paul LEMMEN (HUMANETICS) inform that HUMANETICS is ready to send complete drawing and mold if a new supplier can do it.

PLEASE CONFIRM YOUR ATTENDANCE

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