

**Minutes meeting for 38th meeting of the Informal Group on
Child Restraint System**

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|-------|--------------|------------------------------|----------------|
| Date: | Start | April 16th | 9:30 AM |
| | End | April 16th | 5:00 PM |

Place:

**SMMT offices
71 Great Peter St
London SW1P 2BN, United Kingdom**

1. **Welcome and Roll call** ([CRS-38-12](#))
2. **Adoption of the agenda** ([CRS-38-01](#))
3. **Validation of the minutes of the last meeting** ([CRS-37-06 V2](#))
 - ✦ The sentence “Option 2 is accepted” is replaced by “could be an interim phase 1” in the presentation from Erik SALTERS
 - ✦ Add mention “ECRS” in sentence (Remarks from Peter BROERTJES).
 - ✦ Add mention in the Use of iSize fixtures: “The check of the gabarit has to be done with the CRS adjusted to the largest size of the declared range in at least one seating position. The lateral dynamic test will be preformed in this configuration. For frontal impact, the tests shall be performed with the CRS adjusted to the size of the dummy selected to represent the size range.
4. **Work on Phase 2**
 - 4.1. **TRL presentation on EC Study** ([CRS-38-02](#))
 - ✦ The test matrix allow to check several parameters :
 - the effect of abdominal sensor in Q10;
 - the effect of accessory (IFSTTAR pelvis insert & Humanetics hip shields),
 - the CRS sensitivity on attachment (Isofix & Belt attached) and on lap belt guides,
 - the effect of the seat cushion angle (5° instead of 15°),
 - the effect of the positioning procedure (standard & UMTRI).

Remarks: there are products on the market poorer than the ones used in this crash test session The tests from TRL show consistency of measurement with the abdominal sensor. However, in all configurations tested with Q10, no loading of the lap belt to the abdomen was observed. The abdominal sensors in these conditions were not directly loaded.

4.2. DOREL & IFFSTAR presentation on abdominal loading

- ✦ DOREL presents results on tests performed with the NPACS belted bench & Q6 ([CRS-38-03](#)).
- ✦ Installation method was in line with R44 regulation. Despite, simulations with the Q6 model show submarining effect when the bench has a 5° angle, there were no evidence of submarining with these current tests. Human modeling and Q6 kinematics ([CRS-38-04](#)) from IFSTTAR: Simulation of the bench model from TUB and First results with the 6 years olds human model => Human Model submarines when directly installed on the bench, no submarining occurs when it is in a CRS.
- ✦ The safety benefit of a booster is shown by the human model not by the Q6 dummy.

4.3. Presentation of the Comparison of the R44 test data using ISOFIX booster / Seatbelt booster ([CRS-38-05](#)) from JASIC by Pierre CASTAING.

- ✦ There is no difference on the results with the use or not of the Isofix anchors. Remark from François RENAUDIN: this can also depend of the chosen products.

Contribution requested by Philippe LESIRE

- ✦ In order to know the benefit or not of the Isofix on booster. Philippe needs some data and contribution (from CAPSER, TRL, JAMA, TUB, IFFSTAR, or CRS manufacturer) to prepare another presentation for June meeting.

4.4. Swedish presentation on Booster compatibility. The balance of vehicle and CRS protection for the older children in child restraints ([CRS-38-06](#))

- ✦ Head position is highly dependent of the booster seat & booster cushion: the backrest positions the child's head more forward. A child is more prone to lean forwards when riding in a booster with pronounced lateral head protection. During emergency braking the child's head doesn't stay in place and move forward.
- ✦ Children aged 4-10 (-140 cm) take benefit from the vehicle safety systems, since they are raised in position using boosters,
- ✦ Add on child restraints should be balanced to the in-vehicle safety design,
- ✦ The primary function of a high back booster is to position the child properly with the 3 point belt.
- ✦ For children approx >130cm a booster cushion (without backrest) together with the 3 points belt should be used as their primary restraint.
- ✦ For shorter children the benefit of a backrest is depending on the vehicle used and the behavior of the child during the specific trip.
- ✦ François RENAUDIN mention that it is needed to clarify the limit of responsibility for side protection. The maximum stature seems for Dorel not a very clear criterion for the transition.

4.5. Definition of test bench

4.5.1. Anchorage positions

- ✚ Current NPACS lower anchorages induce interference problems (load cell and belt plate) in lateral configuration with intruding door.
- ✚ Presentation from F. RENAUDIN of anchorages positions ([CRS-38-07](#)).
- ✚ The recommendation of the group is to investigate cutting of the door to prevent these interactions rather than modifying anchorages positions.. Action: CLEPA with TRL collaboration

4.5.2. Strap definition

- ✚ Strap definition : use the same definition as R44
- ✚ First the anchorages location needs to be defined. Then the belt length could be defined using the R16 gabarit.
- ✚ Retractor: A more clear definition of the feature is needed.

4.5.3. Installation on test bench

- ✚ Take the installation method from the R44 regulation and adapt it for iSize reg. Action Chairman + Secretary with advice of TSG.

- ✚ Presentation of the review of seatbelt anchorage and dimensions of test bench seat cushion form JASIC ([CRS-38-08](#)).

- ✚ Presentation of accident case ([CRS-38-09](#)) by Philippe LESIRE: Soft vehicles with low impact speed (45kmh vs 45 km/h with 30° angle => this accident was not more severe than the R44 level). After this accident, adults were OK, but the 28 month child seated in a booster shield died. The car seat was chosen by parents because it is a good one according to rating. The Child fatal injuries occur on head and abdominal area. The shield restrain explain the fatal injury mechanism on the abdomen.

4.6. Validation of side impact feasibility with belt anchorages

- ✚ DOREL already perform tests on booster without any problem. It should not be an issue for integral product.

4.7. Definition of universal booster seat

- ✦ Booster seat without Isofix connectors: Yes
- ✦ Booster seat with Isofix connectors : Yes if they are stowable and if there is no anti rotation system needed
- ✦ Side protection requested up to "135" cm

4.8. Definition of universal booster cushion

- ✦ Booster cushion without Isofix connectors: Yes
- ✦ Booster cushion with Isofix connectors: Yes if they are stowable and if there is no anti rotation system needed
- ✦ Allowed for children more than "135"cm.

- ✦ Presentation from Irina DAUSSE of picture ([CRS-38-10](#)) with one interaction between buckle & gabarit when installed with Isofix anchors in a family car.
- ✦ Problem for CRS manufacturer: need to have safe side in booster for consumer testing but this area is problematic for car manufacturer.
- ✦ The height of P10 installed in a booster seat is higher than HIII 5% female.

4.9. Child positioning with adult safety belt (positive guide straps)

4.9.1. Definition of positive guide straps (effective anchorage(s) or not)

- ✦ Review of the presentation of different case possible on the market from P. LESIRE Phase 2 & 3 ([CRS-35-03e](#))
- ✦ Question on car handbook tables ECE16 ([CRS-38-11](#)): if you do something new in the car for iSize you need to modify your handbook, if you change nothing in your car, you do not need to change your handbook.
- ✦ Positive guide straps: Should positive guide maintain properly the belt only during the crash or also during daily life with a moving child?
- ✦ How to test it?
- ✦ Tommy suggests using the body block described in annex 22 of the R44 regulation with a higher force.
- ✦ For the upper guide, is it acceptable that the belt escape from the guide, that the guide breaks or deforms?
- ✦ "Positive" mean "permanent point" for the chairman

5. Update of the list of questions : not realized

- ✚ EC (Peter BROERTJES) provided a brief update on a meeting held on 3 April with the representatives of Dorel, ANEC and EC. In that meeting there were discussion concerning the possibilities for spending media attention coinciding with the introduction of i-Size in the EU. Conclusions from the meeting were that there is a wish for a uniform approach in communicating the merits of i-Size while explicitly endorsed by EC to give it more official credibility and not just a general marketing message. At the moment UNECE R44 is widely known and referred as an important safety aspect. It seems that consumers today are overwhelmed with diverging information provided. Initial conclusions were to provide consumers with "key messages" on the how-and-what for i-Size. Work needs to be done on key questions and their answers and how to conceptualize this in a media format. The following action points are due wk 17: Review key message i-Size (+/- 5 items) – Categorize, brainstorm i-Size Questions – Initial answer on i-Size questions – Initial Media plan for i-Size per party (industry, ANEC, EC)

6. Next meetings

6.1. 39th meeting will be held in Brussels – CLEPA office – June, the 18

6.2. 40th meeting will be held in Bergisch Gladbach – BAST – September, the 18

7. A.O.B.

7.1. Philosophy of the Phase 3 (if needed after previous items)

PLEASE CONFIRM YOUR ATTENDANCE

Before the 12 of June 2013

to:

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