

**12<sup>th</sup> STCBC Meeting****Safer Transport of Children in Buses and Coaches**

Date: 4 October 2022

Time : 9h-12h CET

Location: Web-meeting (Teams)

**1) Welcome & Meeting Arrangements (Chair, Marta)**

Marta (Chair, Spain) welcomed everyone to the web-meeting. Kazumi (Japan) introduced Mr Kotaro Mori as the new representative of MLIT in the Japanese delegation. Marta welcomed Kotaro to the Group.

Marta explained that the meeting will focus on reviewing the draft Regulation, with a view to submitting an Informal Document to the 72<sup>nd</sup> session of GRSP in December 2022. Rudolf (Germany) asked whether a progress report will be submitted to the 124<sup>th</sup> session of GRSG next week. Marta thanked Rudolf for the reminder and agreed to prepare a report for GRSG.

**2) Adoption of the agenda – STCBC-12-01**

The Agenda was adopted with no changes.

**3) Actions from last meeting**

There were no specific actions, except to review the draft Regulation. Marta noted that comments had been received from OICA. The Minutes of the last meeting (STCBC-11-04) were adopted with no changes.

**4) Drafting the new UN Regulation - STCBC-12-02 and STCBC-03 (All)**

Marta invited Salim (OICA) to share their comments with the Group. The following points were highlighted by Salim, or raised by Marta as outstanding items from the last meeting:

**Introduction and scope**

Salim proposed several editorial changes that were accepted by the Group. These included adding ‘built-in’ to the scope and giving manufacturer’s the option of applying the regulation to other bus and coach classes.

**Definitions**

Salim proposed that several seating terms and definitions are added from UN Regulation No. 80, for consistency with that regulation. The Group agreed.

**Markings**

Salim proposed replacing the term ‘registered’ with ‘sold’ in reference to the language used on the airbag warning label. Ronald (Consumers International) explained that registered is a better term because it defines where the vehicle will be used. This is important to ensure any instructions on built-in child restraints are understood. Marta added that registered is typically used in type-approval and Rudolf also expressed a preference for registered.

### Approval

Salim asked how the attachment of the seat to the vehicle is specified, given that this is a component regulation. Marta replies that the vehicle seat that contains the built-in CRS will also need to comply with UN Regulation No. 80, and that the vehicle will comply with UN Regulation No. 14. etc. Rudolf asked if this is stated anywhere. Marta replied that it isn't, but all bus and coach seats must comply with UN Regulation No. 80 (or No. 17). Dinos noted that the relationship between this draft regulation and other applicable vehicle regulations could be explained in the Introduction.

Salim asked whether it would be possible to type-approve a CRS to the regulation that is built-in to the vehicle structure and not within a seat type-approved to UN Regulation No. 80. Marta replied that she wouldn't expect to see such a solution, but it could also be explained in the introduction. Ronald shared an image of such a concept, but noted that it was found with a Google picture search and its origin is unknown. Dinos questioned whether securing a child in what appeared to be a luggage rack was a desirable solution.



### General specifications

Several items were discussed withing the 'General specifications' paragraph. The comprised:

- Lateral-facing:

Salim asked for clarification on the use of lateral-facing CRS and whether they are needed in this regulation. Marta replied that lateral-facing CRS are typically used with small babies and although it seems unlikely that a lateral-facing built-in CRS would be developed for a bus or coach, she would prefer to keep the option open.

- Load-bearing contact point:

Marta reminded the Group of her previous request for members to review the need for a load-bearing contact point requirement. She noted that the UN Regulation No. R129 requirement for a load-bearing contact point applies to built-in CRS as well as conventional CRS. In her view, the requirement is beneficial for boosters by helping to ensure a good belt path across the pelvis. The Group agreed to keep the requirement, however, Yoshinori (Japan) noted that a load-bearing contact point is not relevant for integral built-in CRS because they don't use the vehicle seat belt for their installation. Marta agreed to clarify the wording in the draft regulation.

- Toxicity:

Salim proposed removing the toxicity requirements from the draft regulation. He drew a comparison with flammability, which was removed because it was covered by the vehicle seat requirements. Marta replied that, as far as she is aware, there are no toxicity requirements for vehicle seating that protect children from absorbing potentially dangerous substances. The

Group agreed to keep the toxicity requirements, at least until evidence can be provided that they are covered elsewhere in vehicle type-approval.

#### Tests requirements

The following items were discussed from the ‘tests requirements’ paragraph:

- Corrosion test:  
Salim proposed removing the corrosion test from the draft regulation on the basis that built-in CRS will always be installed in a vehicle and therefore not exposed to more aggressive environments. He noted that a corrosion test is already specified in UN Regulation No. 16 for the vehicle seat belt. Marta replied that the corrosion test requirements are consistent between UN Regulations No. 16 and No. 129. However, similar requirements are needed in this regulation for components of a built-in integral CRS, which wouldn’t be covered elsewhere.
- Overturning test:  
Marta reminded the Group that a final decision needs to be made about the overturning test. Dinos (Secretary, Chair) noted that, at the last meeting, the Group agreed to keep the overturning test from UN Regulation No. 129, for now, but to consider limiting the rotations to the y-axis only. This was subject to a final review and comment by OICA. Rudolf commented that limiting the rotations to the y-axis makes sense. The Group agreed this way forward.
- Dynamic test:  
Marta reminded the Group that a decision needs to be made about the number of seat rows for the dynamic test. She explained that the test could be carried out with a single row for the built-in CRS itself, or with a second row placed in front of the CRS, to assess the risks from head contact. Dinos cautioned about approving a ‘safe head contact’. He explained that a glancing head contact might generate a low HIC value, but could introduce potentially injurious neck loading that the dummy is not necessarily capable of detecting. He mentioned that a horizontal head excursion limit of 550 mm in front of a single row of seating was discussed at the last meeting, which was derived from the minimum space behind a partition specified in UN Regulation No. 107. Rudolf offered support for this approach. Ronald also supported this approach, particularly as it might be difficult to control what seat is placed in front of the built-in CRS, if the interior of the bus is changed. OICA also expressed support.

Salim asked for clarification on the role of a ‘Shoulder strap positioner’ and why provisions are made for it in the dynamic test. Marta explained that a shoulder strap positioner is a device that connects the shoulder straps of an integral harness. UN Regulation No. R129 requires that integral CRS are capable of meeting the performance requirements without the shoulder strap positioner in use, unless there is a mechanism or visual and audible warning system on the CRS to t incorrect use. The draft regulation follows the same approach.

Salim asked whether dummy injury assessment criteria are needed if head excursion is specified in the draft regulation. Marta replied that dummy sensor measurement limits are

needed to assess the risk associated with other (i.e. non-contact) injury mechanisms and/or body regions. Dinos asked whether it is worthwhile specifying monitoring for neck loading and chest deflection, given that only two Contracting Parties supplied monitoring data to GRSP when requested for UN Regulation No. 129. Marta replied that she would prefer to keep the requirement for technical services and type-approval authorities to record these parameters for monitoring purposes. Marta proposed that a vertical head excursion limit is not needed for buses and coaches as the roof is much higher than passenger cars. The Group agreed.

Marta explained that the sled pulse characteristics in the draft regulation are derived from UN Regulation No. 129, which sets slightly different test parameters depending on whether the laboratory uses an acceleration or a deceleration sled. She noted that, in contrast, UN Regulation No. 80 specifies no such differences. She asked the Group for their views on which approach to follow. Yoshinori suggested that the draft regulation should follow UN Regulation No. 80 for consistency. This would allow a technical service to use the same conditions for either type of product. The Group agreed.

Marta summarised the adult dummy installation procedure in UN vehicle regulations with impact tests with a view to adopting something similar for this regulation. This was necessary because the child dummy installation procedure from UN Regulation No. 129 is not directly applicable for this regulation, due to differences in the test bench and seat belt system compared with real vehicles. The Group agreed. Yoshinori noted that any references to Hybrid III dummy landmarks should be removed.

- Adjusting device test:

Salim asked whether a conditioning test for adjusters mounted on a CRS is needed for a built-in CRS. Dinos explained that the adjuster conditioning test simulates repeated use of the harness adjusting device prior to an impact. An integral built-in CRS will need a mechanism for adjusting the harness and this could either be built into the structure of the CRS, or it could be placed on the strap. In either case, the draft regulation will need to specify the test procedure and requirements.

#### Test reports of type-approval

Marta introduced new wording that specifies the minimum content for the type-approval test report. She explained that the detailed list of content recently adopted for UN Regulation No. 129 is unique to that regulation and she proposes a simpler approach for this regulation. The Group agreed.

#### Transitional provisions

Marta noted that transitional provisions are not needed for a new regulation.

**5) Confirmation of tasks and responsibilities**

No significant tasks and responsibilities were recorded. However, the Group was asked to review the draft regulation (STCBC-12-02) before the next meeting and to take note of any open discussion points (highlighted blue, possibly with markup comments).

**6) AOB**

No other business was discussed.

**7) Next meeting**

The next meeting was scheduled for November 22, from 9.00 to 12.00 (CET).

**Appendix 1 – Attendees**

Marta Angles – Chair	Spain
Dinos Visvikis – Secretary	CLEPA
Daniel Kutschkin	Australia
Abdul Nilar	Australia
Ronald Vroman	Consumers International
Rudolf Gerlach	Germany
Britta Schnottale	Germany
Sagar Singamsetty	IRU
Kotaro Nori	Japan
Yoshinori Tanaka	Japan
Kazumi Watanabe	Japan
Jun Gue Kwak	Korea
Salim Abdennadher	OICA
Tomasz Lorenc-Osowski	OICA
Sahin Hasan	OICA
Miriam Asiain Fernandez	Spain
Victor Calzadilla Garcia	Spain