

20th STCBC Meeting**Safer Transport of Children in Buses and Coaches**

Date: 08 May 2024

Time : 09.30h -15.00h CET

Location: TASS International, Helmond

1) Welcome & Meeting Arrangements (Chair, Marta)

Marta (Chair, Spain) welcomed everyone to Helmond and thanked TASS for hosting the meeting and workshop.

2) Adoption of the agenda – [STCBC-20-01](#) (All)

Rudolf (Germany) informed the Group that he presented a status report on their behalf at the 127th session of GRSG ([GRSG-127-15](#)). No specific feedback was received from the experts at GRSG.

Marta (Chair, Spain) explained that IDIADA has received requests for the type-approval of CRS that are built-in to bus seats. For the time being, IDIADA has continued to issue these approvals to UN R44 because it's unclear whether UN R170 is acceptable for EU Whole Vehicle Type-Approval (because UN R170 is not currently referenced in the “General Safety Regulation¹”). She added that Spain will raise the issue at the EU Forum for the Exchange of Information on Enforcement of the EU legislation on the approval and market surveillance of motor vehicles.

Marta noted that adding UN R170 to the General Safety Regulation will facilitate type-approvals to the new regulation in the EU, but manufacturers will still have the choice between UN R44 and UN R170. There will be no imperative to use the new regulation tailored specifically for buses and coaches (except for the incentive of a less severe crash pulse than UN R44). She asked the Group to consider proposing an amendment to UN R44 to prevent new type-approvals of built-in CRS. This would be consistent with the amendments made to UN R44 to prevent new type-approvals of non-built-in CRS when UN R129 was introduced.

Dinos (Secretary, CLEPA) reminded the Group that although UN R44 had been amended to prohibit new type-approvals of most non-built-in CRS, this had not been extended to booster cushions. This was due to changes implemented in Revision 3 of the 1958 Agreement, which required old versions of regulations to remain open for Contracting Parties that might wish to use them. Instead, UN R44 was amended to give Contracting Parties the option of not *accepting* UN R44 type-approvals of all types of non-built-in CRS in their territories after September 2023. However, new type-approvals of non-built-in booster cushions can still be granted under UN R44.

The Group agreed in principle with the idea to restrict the approval and/or acceptance of built-in CRS in

¹ Regulation (EU) 2019/2144 on type-approval requirements for motor vehicles and their trailers, and systems, components and separate technical units intended for such vehicles, as regards their general safety and the protection of vehicle occupants and vulnerable road users:

<https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32019R2144>

UN R44. GRSP will be informed of the plan at the next session ([GRSP-75](#)) and Marta will prepare a proposal for a later session (e.g., [GRSP-76](#)).

The Agenda was adopted with no additions.

3) Workshop

Marta summarised the main outcomes of the workshop in which a range of CRS and dummies were installed in a coach equipped with two-point seat belts. The key observations were:

- No problems were found with the length of the seat belt in this particular coach. However, seat belt length is not regulated (unless the vehicle/seating position is approved by UN R16 for the installation of Universal category CRS, which is typically applicable to M₁ vehicles only).

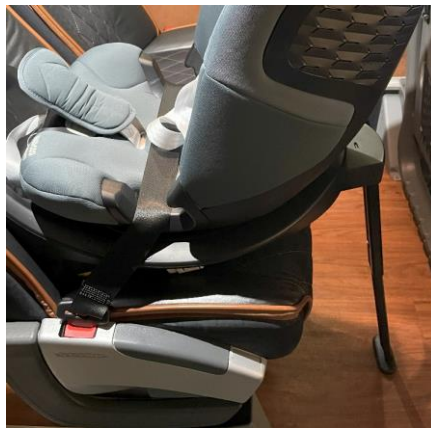


Forward-facing CRS (seating unit lifted to allow access to belt route)



Rear-facing CRS

- CRS support legs, where present, were able to reach the floor of the coach.



Rear-facing CRS



CRS base

- The seat spacing in the coach was quite generous and was able to accommodate the forward-facing CRS. However, there was insufficient space for the infant carrier unless the seatback was reclined significantly. This suggests that some rear-facing seats may not fit in all buses and coaches.



Forward-facing CRS



Rear-facing CRS (infant carrier)

- Booster seats improved the lap belt path with the Q3 and Q6 dummies, compared with the vehicle seat alone. This was particularly noticeable with the Q3 dummy, which was unable to bend its knees over the edge of the vehicle seat without slouching.



Q3 dummy on coach seat (no CRS)



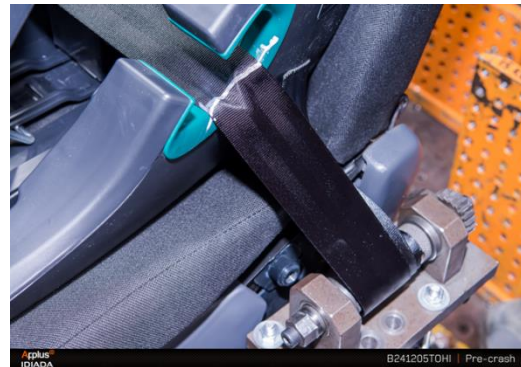
Q3 dummy on booster seat

Although most CRS were able to fit and be restrained in the coach, the Group discussed how to ensure there is proper provision for children and CRS in these vehicles. Space (for the CRS and child) and seat belt length was not a significant problem in the particular coach examined during the workshop, but other buses and coaches might be different and their compatibility with children is not guaranteed. Michael (OICA) commented that an “if fitted” approach is best whereby if a seating position is provided for children, it must do “x, y or z”. Marta noted that the Introduction already covers this, but Michael replied there is nothing in UN R107 and so he suggests that something is added to highlight certain prescriptions that must be met if a CRS position is provided. Michael and Rudolf agreed to work on this further.

4) Review test results regarding the test bench – [STCBC-20-03](#) (Chair, Marta)

Marta reminded the Group of the dynamic tests carried out by IDIADA to investigate whether the UN R129 test bench could be a valid tool to assess CRS performance in buses and coaches equipped with a two-point belt. The tests compared the performance of an infant carrier (Q1.5) and forward-facing CRS (Q3) on the UN R129 test bench vs. a representative coach seat and were reported at the previous meeting ([STCBC-19-03](#)). The results showed that both CRS achieved lower dummy measurements with the UN R129 test bench than the real coach seat and although the values were well below injury thresholds, the dummy head excursion was significantly lower. The Group agreed, therefore, that testing on a real coach seat will be necessary for UN R170 in order to more accurately represent the environment in buses and coaches. However, the tests were carried out on a coach seat equipped with a three-point seat belt in which the diagonal part of the belt was not used (i.e., to replicate a two-point belt). Although this was done for practical reasons, the Group felt it might have introduced slack, which could have influenced the comparison with the R129 bench. The Group further suggested that the tests with the coach seat be repeated with a real or simulated two-point belt.

Marta reported that the tests with the coach seat had been repeated successfully with a simulated two-point belt that could be tensioned using the procedures described in UN R44. The results confirmed that the UN R129 test bench was unable to predict the performance of the CRS on the coach test, mainly due to the different length and angle of the seat cushion. The Group agreed that the choice of the particular coach seat used for the type-approval test will be the choice of the laboratory; however, UN R170 will define a set of essential characteristics the seat must comply with, such as the seat belt anchorage location, cushion/backrest angle, etc. The regulation may also need to specify the maximum number of tests that the seat cushion can be used for, before replacement.



5) Review of the open issues and decisions – [STCBC-20-02](#) (All)

Marta introduced the spreadsheet document that is being used to track the important issues and decisions made by the Group during the development of Phase 2 of the Regulation ([STCBC-20-02](#)). The spreadsheet provides a record of the status, decisions and actions agreed by the Group at this meeting. Of particular note, the Group agreed:

- A CRS type-approved to UN R170 for installation with a two-point belt in buses and coaches will be required to have a separate instructions that are tailored to these vehicles. Installation drawings will not be allowed on the CRS to avoid confusion when it is used in cars.

- It is necessary to amend paragraph 5.2 of UN R129, which states that a CRS shall not bear more than one approval number. Ronald (ANEC) agreed to draft a proposal for the December 2024 session of GRSP.
- Belt-attached CRS that are equipped with a top tether or a support leg will be tested with the two-point belt only as the compatibility between these devices and buses and coaches cannot be guaranteed. However, their use in vehicles will not be prohibited (i.e., if the vehicle has a top tether anchorage, or if the CRS support leg is able to reach the floor).
- Guidance will be sought from GRSP in May as to whether belt-attached CRS approved to UN R44 can also apply for approval to UN R170 (it is currently limited to R129 CRS). Rudolf (Germany) suggested an “over the air approval” should be granted for CRS that are already purchased and in people’s homes.

6) Confirmation of tasks and responsibilities

Actions were recorded in the working spreadsheet ([STCB-20-02](#)).

7) AOB

No other business was discussed.

8) Next meeting

The next meeting was scheduled for 9th July 2024 (12.00-14.00, CET), online.

Appendix 1 – Attendees

In person

Marta Angles – Chair	Spain
Dinos Visvikis – Secretary	CLEPA
Erik Salters	CLEPA
Ronald Vroman	ANEC
Rudolf Gerlach	Germany
Britta Schnottale	Germany
Michael Becker	OICA
Tim Janssen	TASS International