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**Economic Commission for Europe**
**Inland Transport Committee**
**World Forum for Harmonization of Vehicle Regulations**
**Working Party on Passive Safety**
**Seventy-fourth session**

Geneva, 4–8 December 2023

**Report of the Working Party on Passive Safety  
 on its Seventy-fourth Session**
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## I. Attendance

1. The Working Party on Passive Safety (GRSP) held its seventy-fourth session from 4 to 8 December 2023 in Geneva. Chaired by Mr. M. Koubek (United States of America), experts from the following countries participated following Rule 1(a) of the Rules of Procedure of the World Forum for Harmonization of Vehicle Regulations (WP.29) (ECE/TRANS/WP.29/690/Rev.1): Australia, Austria, Canada, China, Czechia, Finland, France, Germany, India, Italy, Japan, Netherlands, Norway, Poland, Republic of Korea, Russian Federation, South Africa, Spain, Sweden, Switzerland, United Kingdom of Great Britain and Northern Ireland, United States of America. The European Commission (EC) participated. Experts from the following non-governmental organizations participated: American Automotive Policy Council (AAPC), Consumers International (CI), European Association of Automotive Suppliers (CLEPA), International Motor Vehicle Inspection Committee (CITA), International Motorcycle Manufacturers Association (IMMA), International Organization of Motor Vehicle Manufacturers (OICA) and World Bicycle Industry Association (WBIA).
2. Annex I lists the informal documents of the session.

## II. Adoption of the Agenda (agenda item 1)

*Documentation:* ECE/TRANS/WP.29/GRSP/2023/25  
Informal documents GRSP-74-02 and GRSP-74-16-Rev.1

3. GRSP considered and adopted the agenda (ECE/TRANS/WP.29/GRSP/2023/25), the running order (GRSP-74-02) and the annotations (GRSP-74-16-Rev.1). GRSP informal working groups are listed in annex X.

## III. UN Global Technical Regulation No. 9 (Pedestrian safety) (agenda item 2)

### Proposal for Amendment 3

*Documentation:* ECE/TRANS/WP.29/2023/31  
Informal documents GRSP-74-11-Rev.1 and GRSP-74-22-Rev.1

4. The expert from the Republic of Korea, Chair of the Informal Working Group on Deployable Pedestrian Protection Systems (IWG DPPS), introduced the final progress report of the Group (GRSP-74-11-Rev.1) and the final proposal for Amendment 3 to the UN GTR (ECE/TRANS/WP.29/2023/31 and GRSP-74-22-Rev.1).
5. GRSP recommended the proposal of Amendment 3 to UN GTR No. 9 (ECE/TRANS/WP.29/GRSP/2023/31) as amended by annex II of this report, and the final report of the IWG DPPS (GRSP-74-11-Rev.1) as reproduced in annex II to the report. The secretariat was requested to submit the proposal and the final report as draft Amendment 3 to UN GTR No. 9 for consideration and vote to the Executive Committee of the 1998 Agreement (AC.3) at its June 2024 session.

## IV. UN Global Technical Regulation No. 13 (Hydrogen and Fuel Cell Vehicles) (agenda item 3)

*Documentation:* ECE/TRANS/WP.29/GRSP/2023/26  
Informal document GRSP-74-13

6. The expert from OICA, Secretary of IWG GTR13, Phase 2, introduced ECE/TRANS/WP.29/GRSP/2023/26 and GRSP-74-13 proposing corrections to the Amendment 1 to the UN GTR established by WP.29 and AC.3 at their June 2023 sessions. The GRSP Chair clarified that the corrections aimed to resolve mistakes introduced during the drafting of the amendment and would not affect the proposed use of the regulatory text.

7. GRSP recommended the proposal and requested the secretariat to submit ECE/TRANS/WP.29/GRSP/2023/26, as amended by annex III to the report as Corrigendum 1 to Amendment 1 to UN GTR No. 13 for consideration and vote at the June 2024 session of AC.3.

## V. UN Global Technical Regulation No. 20 (Electric vehicle safety) (agenda item 4)

*Documentation:* Informal documents GRSP-74-33-Rev.2 and GRSP-74-35

8. The EVS IWG Chair, on behalf of the co-sponsors (China, European Union, Japan, and the United States of America) and of the members of IWG GTR No. 20, Phase 2, reported on the progress (GRSP-74-33). He reported that at its last meeting held in Tokyo, Japan, the IWG did not yet reach consensus on a technically appropriate position or combination of the positions outlined in the progress report (the details of positions held can be found in the full report of the IWG). As the mandate of the IWG is currently set to expire at the end of Dec 2023, he announced that a Special Session of AC.3 was scheduled to take place on Dec 20, 2023, to discuss a possible extension of the mandate to allow further deliberations and possible resolution.

9. The representative of the United States of America asked that GRSP consider recommending that AC.3 grant an extension of the mandate of the IWG to allow for resolution. He added that a harmonized technically sound solution could be reached if the IWG would cooperate to develop a workplan with clear milestones and timelines tasking into account the needs of all members of GRSP.

10. The representative of the EC, speaking on behalf of the EU Member States stated that the EU would oppose the extension of the mandate of the IWG. He stated that during the meeting in Tokyo, the EC, China, Japan and Korea had agreed on a compromise solution. He also informed GRSP that these four CPs agreed to work in a separate group organized by the EC. He announced that the activity is open to all interested CPs. Further, he added that that the four CPs would request a new group under the framework of the 1958 Agreement to amend UN Regulation 100, by the May 2024 GRSP session. To that end, he introduced draft terms of reference (GRSP-74-35) and requested, with the support of the EU Member States, that a new group be established under GRSP.

11. The Chair concluded the discussion by deferring to the outcome of the Special Session of AC.3 regarding the IWG mandate extension under the 1998 Agreement, and to WP.29 for possible establishment of a new group on EVS under the 1958 Agreement.

## VI. UN Regulation No. 14 (Anchorage of safety-belts) (agenda item 5)

*Documentation:* ECE/TRANS/WP.29/GRSP/2023/27  
ECE/TRANS/WP.29/GRSP/2023/28  
Informal documents GRSP-74-19 and GRSP-74-20

12. The expert from Finland introduced ECE/TRANS/WP.29/GRSP/2023/27 to propose a new series of amendments to UN Regulations Nos. 14 that removes the derogations for the two-point safety belts. The expert from France and Italy requested more information and supporting evidence. While the experts from Norway and Sweden supported the proposal, the expert from the United Kingdom requested further statistical data to support the proposal. The expert from Australia stated that he would like to provide further data to clarify the way forward in view of was insufficiently support for the proposal. On the suggestion of the GRSP Chair, the Group agreed to resume discussion at its May 2024 session based on further statistical data and a cost-benefit analysis, and then to conclude on ECE/TRANS/WP.29/GRSP/2023/27.

13. The expert from OICA introduced a presentation (GRSP-74-20) to reintroduce a proposal (ECE/TRANS/WP.29/GRSP/2023/28, amended by GRSP-74-19) that allowed occupants to use alternative seating positions only if this was not in conflict with any other

UN Regulation. The expert from Germany recommended the need to start studies and to reflect on this subject to introduce a proper amendment. The expert from France agreed. The expert from the Netherlands stated that an adoption of the proposal was premature. He added that the topic was relevant and suggested focusing on broader perspectives (e.g. autonomous vehicles and new interior layouts). Finally, GRSP agreed to establish a group of interested experts led by Germany and to organize a workshop (managed by OICA). Experts from contracting parties were invited to join the discussion and to also table concerns.

## VII. UN Regulation No. 16 (Safety-belts) (agenda item 6)

*Documentation:* ECE/TRANS/WP.29/GRSP/2023/29  
ECE/TRANS/WP.29/GRSP/2023/32  
Informal documents GRSP-74-06, GRSP-74-07, GRSP-74-14 and  
GRSP-74-24-Rev.5.

14. GRSP agreed with the conclusions of paragraph 11, in reference to ECE/TRANS/WP.29/GRSP/2023/29 which complements the proposal on safety-belt anchorages and removes derogations for two-point safety-belts on buses and coaches.

15. The expert from the Netherlands introduced a presentation (GRSP-74-07) for a proposal (GRSP-74-06) that defines the judgement phase of the dynamic safety-belt component test on the sled. The experts from France and the Republic of Korea asked for a time reservation on the proposal. The expert from Spain stated her intention to participate if a task force on this subject was established. Finally, the expert from the Netherlands announced that he would email interested experts, through the secretariat, to participate in this effort.

16. The expert from the Netherlands also informed GRSP about the start of activities of interested experts on restructuring UN Regulation No. 16. The first meeting of the Group was scheduled for 9 and 10 January 2024 in Brussels. He added that this activity aimed solely at splitting the UN Regulation and not at introducing new provisions. He concluded that IWG on International Whole Vehicle Type Approval (IWVTA) had been informed, and that objection had not been raised on this activity (see paragraph 43 of this report).

17. The expert from the Republic of Korea introduced GRSP-74-14, prepared by the Safety-Belt Reminder (SBR) ad hoc group to address SBR related issues in UN Regulation No. 16. He announced that the ad hoc group would convene on 22 January 2024 to revise GRSP-74-14 and submit an official proposal for the May 2024 session of GRSP.

18. The expert from Germany introduced GRSP-74-31 to clarify how to conduct the buckle-opening test in paragraph 7.8. of the UN Regulation. He added that he aimed to collect comments from GRSP experts on his proposal and to introduce a revised version at the May 2024 session of GRSP. GRSP also noted that if a new replacement proposal was not received by the secretariat, GRSP-74-31 should be confirmed for submission as an official document before the deadline.

19. The expert from Japan introduced GRSP-74-24-Rev.5 amending ECE/TRANS/WP.29/GRSP/2023/32 to prevent the negative effects of slack from the buckle of the safety belt on vehicle occupants. GRSP adopted ECE/TRANS/WP.29/GRSP/2023/32 as amended by annex IV of this report. However, since the work on splitting the UN Regulation was on hold, the secretariat was requested to submit the proposal as the draft 10 series of amendments to UN Regulation No. 16 to the next appropriate WP.29 and AC.1 sessions, indicated by the group of experts on restructuring the UN Regulation.

## VIII. UN Regulation No. 17 (Strength of seats) (agenda item 7)

*Documentation:* ECE/TRANS/WP.29/2023/15

20. GRSP note that WP.29 at its November 2023 session had returned ECE/TRANS/WP.29/2023/15 to GRSP for further revision (see ECE/TRANS/WP.29/1175, paragraph 106). The expert from OICA, explained that the proposal of Supplement 1 to the 10 series of amendments had already been incorporated in the 11 series of amendments to UN Regulation No. 17 that had been adopted at the November 2023 session of WP.29. He

further explained that this supplement would imply a new provision that would enter into force immediately creating problems to manufacturers. Therefore, he suggested that the proposal be withdrawn. The expert from Germany, author of ECE/TRANS/WP.29/2023/15, insisted that the proposal was still needed. He offered to revise the proposal for further discussion at the May 2024 session of GRSP.

## **IX. UN Regulation No. 94 (Frontal impact) (agenda item 8)**

21. New information was not provided.

## **X. UN Regulation No. 95 (Lateral impact) (agenda item 9)**

22. New information was not provided.

## **XI. UN Regulation No. 100 (Electric power trained vehicles) (agenda item 10)**

*Documentation:* ECE/TRANS/WP.29/GRSP/2023/35  
ECE/TRANS/WP.29/GRSP/2023/36  
Informal documents GRSP-74-34 and GRSP-74-38

23. The expert from the Netherlands reiterated a proposal (ECE/TRANS/WP.29/GRSP/2023/35 and amendment GRSP-74-38) that: (a) identifies heavy duty vehicles equipped with an electric drivetrain and (b) confirms that additional labelling would support emergency services to determine how to approach these vehicles in case of a fire. The expert from the Russian Federation introduced GRSP-74-34 to reintroduce his proposal (ECE/TRANS/WP.29/GRSP/2023/36) that extends the identification of vehicles to categories M and N with an electric drivetrain. The expert from OICA argued that both proposals were challenging. He invited experts to look for solutions other than labelling to provide information (e.g. rescue sheets available on internet). The expert from the Russian Federation also insisted that the identification of passenger cars with electric power train would be needed due to the low number of electric vehicles in traffic. The expert from Australia suggested merging the proposals as he agreed on the need for labelling all electric vehicles in this transitional phase. The expert from France informed GRSP that the Euro New Car Assessment Programme (EuroNCAP) had confirmed that rescue sheets were also available offline. The expert from the Netherlands noted that it was not possible to link any single vehicle to rescue sheets. The expert from EC suggested keeping this proposal on hold until the amendment on UN Regulation No. 100 on thermal propagation was finalized, so as to submit an amendment as a complete package. The expert from the Netherlands clarified that the proposal would be needed without any further delays. Finally, GRSP adopted ECE/TRANS/WP.29/GRSP/2023/35 as amended by annex V of this report. The secretariat was requested to submit the proposal as draft 04 Series of Amendments to UN Regulation No. 100 for consideration and vote at the June 2024 sessions of WP.29 and AC.1.

## **XII. UN Regulation No. 127 (Pedestrian safety) (agenda item 11)**

*Documentation:* ECE/TRANS/WP.29/2023/50  
Informal document GRSP-74-21

24. The expert from OICA introduced GRSP-74-21 to amend Supplement 1 to the 04 series of amendments (ECE/TRANS/WP.29/2023/50), adopted at the June 2023 session of WP.29, by clarifying the definition of the "third of windscreen". He requested GRSP experts to provide comments on the proposal by the end of February 2024 for the submission of an official, revised version at the May 2024 session of GRSP. GRSP noted that if a new replacement proposal was not received by the secretariat, GRSP-74-21 should be confirmed for submission as an official document before the deadline.

### **XIII. UN Regulation No. 129 (Enhanced Child Restraint Systems) (agenda item 12)**

*Documentation:* ECE/TRANS/WP.29/GRSP/2023/38  
Informal documents GRSP-73-53, GRSP-74-03, GRSP-74-10, GRSP-74-29-Rev.1 and GRSP-74-36

25. The expert from CLEPA introduced ECE/TRANS/WP.29/GRSP/2023/38 with a presentation (GRSP-74-36): to reinstate the reference to the one-belt route for installation of boosters (paragraph 6.1.3.4. of the UN Regulation) and to clarify the choice of the dynamic test on a vehicle body shell or on the test bench. The expert from the Netherlands fully supported the proposal which clarified and solved grey areas, so as to provide a full understanding of testing procedure for technical services. GRSP adopted ECE/TRANS/WP.29/GRSP/2023/38 not amended. The secretariat was requested to submit the proposal as draft Supplement 11 to the 03 series of amendments and Supplement 1 to the 04 series of amendments to UN Regulation No. 129 to the June 2024 sessions of WP.29 and AC.1.

26. The expert from CLEPA also introduced GRSP-74-03 that sets strict design requirements to reduce misuse of type-approved Child Restraint Systems (CRS) already on market that had features that were not allowed by UN Regulation No. 129. He requested feedback from the experts on what can and should be done. The expert from Finland informed GRSP that when a situation of this kind occurred in his country, market surveillance intervened to withdraw the product from the market. GRSP agreed to keep GRSP-74-03 on the agenda of the May 2024 session of GRSP for further consideration.

27. The expert from the Netherlands introduced GRSP-74-10 which requests guidance on Supplement 10 to the 03 series to UN Regulation No. 129 (ECE/TRANS/WP.29/2023/120). He explained that the proposal had been adopted by WP.29 at its November 2023 session to clarify the existing requirement on "one-belt route". He recalled to GRSP that the proposal aimed for a better understanding of Type Approval Authorities to guarantee a prevention of misuse by end-users of the product. He added that introducing clarification through the supplement would lead to uncertainty on previous type approvals granted in the same series of amendments but based on different interpretations. He added that the same uncertainty would be reiterated for extensions of these type approvals preceding the supplement. He therefore requested experts to provide feedback for discussion to Type Approval Authority Meetings (TAAM). The expert from CLEPA confirmed the relevance of this issue for GRSP. GRSP recommended its experts to be increasingly vigilant on this type of matters. The Chair of GRSP was requested to highlight this issue in his intervention at the March 2024 session of WP.29.

28. The expert from France introduced GRSP-74-29-Rev.1, based on a presentation introduced at the May 2023 session of GRSP (GRSP-73-53). She recalled that the proposal would allow installation of a headrest on the bench in the dynamic frontal test of a universal booster cushion with a Q10 dummy. She clarified that this would allow testing of the universal booster cushion, without damaging the neck of the dummy. GRSP adopted GRSP-74-29-Rev.1 as reproduced by annex VI to the report. The secretariat was requested to submit the proposal as part of (paragraph 25) draft Supplement 11 to the 03 Series of amendments and as part of draft Supplement 1 to the 04 Series of Amendments to UN Regulation No. 129 for consideration and vote at the November 2023 sessions of WP.29 and AC.1.

### **XIV. UN Regulation No. 134 (Hydrogen and Fuel Cells Vehicles) (agenda item 13)**

*Documentation:* Informal document GRSP-74-12

29. The expert of the Task Force to transpose Amendment 1 of UN GTR No. 13 into UN Regulation No. 134 introduced GRSP-74-12, correcting UN Regulation No. 134 (Hydrogen fuel-cell vehicles). GRSP adopted GRSP-74-12, as reproduced by annex VII to the report. The secretariat was requested to submit the proposal as corrigendum 1 to the original version

of UN Regulation No. 134 for consideration and vote to the June 2024 sessions of WP.29 and AC.1.

## **XV. UN Regulation No. 137 (Frontal impact with focus on restraint systems) (agenda item 14)**

*Documentation:* ECE/TRANS/WP.29/GRSP/2023/34

30. The expert from Japan reiterated a proposal (ECE/TRANS/WP.29/GRSP/2023/34) on amending the requirement of the Thorax Compression Criterion (ThCC) of the 5th female dummy in vehicles of category N<sub>1</sub> with a maximum permissible mass not exceeding 2,800 kg. The expert from Italy expressed concerns that the amendment would impact on the market of this vehicle category that was widely used for goods delivery. The expert from the Republic Korea informed GRSP that the proposal had received negative feedback in his country. The expert from OICA underlined that the proposal focused mainly on a national situation and not on those of other countries. The expert from the Netherlands proposed the possibility of establishing a two-step approach for implementing the proposed requirements for countries which needed them. GRSP noticed that this approach would potentially infringe on the principle of mutual recognition of type approvals of the 1958 Agreement. Finally, GRSP agreed to provide a further study reservation to the proposal and resume consideration on it at its May 2024 session.

## **XVI. UN Regulation No. 145 (ISOFIX anchorage systems, ISOFIX top tether anchorages and i-Size) (agenda item 15)**

31. New information was not provided.

## **XVII. Mutual Resolution No. 1 (agenda item 16)**

*Documentation:* ECE/TRANS/WP.29/GRSP/2023/33  
ECE/TRANS/WP.29/GRSP/2023/37  
Informal documents GRSP-74-09-Rev.1, GRSP-74-23-Rev.1 and GRSP-74-39

32. As per paragraphs 4 and 5, the experts from Austria and the Republic of Korea, on behalf of IWG, introduced ECE/TRANS/WP.29/GRSP/2023/33 and GRSP-74-23-Rev.1 amending it, to introduce a proposal of addendum to Mutual Resolution No.1 (M.R.1) submitted by the IWG to calculate Head Impact Time and concerning provisions for: (a) DPPS Generic Vehicle Models and (b) developing Human Body Model qualification corridors. GRSP adopted ECE/TRANS/WP.29/GRSP/2023/33, as amended by annex VIII of this report and requested the secretariat to submit it as draft Amendment 4 to M.R.1 for consideration and vote at the June 2024 sessions of WP.29 and AC.3.

33. The expert from the Netherlands introduced ECE/TRANS/WP.29/GRSP/2023/37 and GRSP-74-09-Rev.1 amending it, to propose a new addendum to the M.R.1 to reproduce specifications of the three-dimensional H point machine. However, GRSP agreed to defer the adoption of the proposal to its May 2024 session to allow adoption at the same time of amendments to relevant UN Regulations and UN GTRs together those in the remit of the Working Party on General Safety Provisions and submit all proposals to the November 2024 sessions of WP.29 and AC.3.

34. The expert from Germany on behalf of the Task Force for the implementation of Q UN-Dummies into M.R.1 (TF-QUN) introduced the status report (GRSP-74-39) of the group. GRSP noted good progress in the work of the TF-QUN and agreed to resume consideration on this subject at its May 2024 session.



## **XVIII. Equitable Occupant Protection (agenda item 20)**

*Documentation:* Informal documents GRSP-74-05, GRSP-74-08 and GRSP-74-30

35. The expert from Sweden, Chair of IWG on Equitable Occupant Protection (EqOP) introduced a status report (GRSP-74-05) highlighting the work of the different task forces in the IWG. She underlined that one of the most relevant tasks of IWG was to improve the robustness of concerned regulations with priorities based on the relevance of the injury types. GRSP also noted a presentation from the expert of the Netherlands (GRSP-74-08) proposing improvement on head restraint test procedures in UN Regulation No. 17 and UN GTR No. 7. He explained the importance of defining and of testing head restraint gaps to limit whiplash. The expert from Sweden underlined the relevance of this issue and added that the work could be developed within the IWG. The expert from Germany suggested that a better definition of gaps should be introduced. He also said that a workshop at the Federal Highway Research Institute (BAST) had been held on this subject; the issue was developed, and a solution found. He did add that limits should be further developed.

36. GRSP further noted a presentation from the expert of CLEPA (GRSP-74-30) on differences of whiplash performance for mid-size male and mid-size female dummies in seats which suggested possible geometric improvements for seat/head restraint. He noted that this was a first step for a full discussion of the issue. The expert from the Netherlands stated that head restraints should protect everybody, and that GRSP-74-30 revealed a weakness of current head restraints which did not cover the whole range of occupants. He added that a harmonized approach should be found to amend UN GTR No. 7 and UN Regulation No. 17. The experts from Austria and Sweden agreed with the expert from the Netherlands. The expert from Canada supported an improvement in parallel with UN GTR No. 7 and UN Regulation No. 17. The expert from Germany fully supported a discussion in the remit of a task force of EqOP IWG. The expert from the United States of America requested a time reservation to better understand the issue. GRSP agreed to resume discussion at its May 2024 session.

## **XIX. Securing Children in Buses and Coaches (agenda item 21)**

*Documentation:* ECE/TRANS/WP.29/GRSP/2023/30  
Informal document GRSP-74-01

37. The expert from Spain, Chair of IWG on Safer Transport of Children in Buses and Coaches (IWG-STCBC) introduced the status report of the Group (GRSP-74-01). She confirmed that the second phase of the UN Regulation would entail Child Restraint Systems (CRS) in combination with two-point safety belts. She clarified that separate components on CRS for installation would not be allowed, nor combinations of two-point belts and top tether or support leg. Moreover, she explained the ongoing and upcoming IWG activities on test procedures. Finally, she introduced a proposal (ECE/TRANS/WP.29/GRSP/2023/30) of revised ToR of IWG-STCBC. GRSP agreed to resume consideration on this subject at its May 2024 session and endorsed the revised IWG ToR (ECE/TRANS/WP.29/GRSP/2023/30) without amendments, that would be highlighted by the GRSP Chair at the March 2024 session of WP.29 for endorsement.

## **XX. Exchange of Views on Vehicle Automation (agenda item 19)**

*Documentation:* ECE/TRANS/WP.29/2023/86  
Informal document GRSP-74-32

38. The expert from Germany, Chair of the Task Force on Autonomous Vehicles Regulatory Screening (TF AVRS) of GRSP, introduced GRSP-74-32 on the outcome of the work. He explained that a first report to WP.29 (ECE/TRANS/WP.29/2023/86) was re-submitted with translations as ECE/TRANS/WP.29/GRVA/2023/18, contains global results, summary sheets for each screened Regulations and was then adopted by WP.29 at its June 2024 session. He added that all Working Groups (WGs) might start drafting amendments to

proposed "priority Regulations" and should present a timeline for amending them at WP.29 in March 2024. He added that coordination between groups should continue for common definitions, translations and solutions to cross WGs issues. He also informed GRSP about the outcome of the meeting of the TF leaders on Autonomous Vehicles Regulatory Screening, held in Paris on 16 and 17 October 2023. As a result of that meeting, he informed GRSP that WP.29 recognized the urgency to consider automated vehicles and their classification before March 2024. He added that given the complexity of vehicle categories under both the 1958 and 1998 Agreements, the expert groups believe that work should begin immediately with a first meeting in January 2024, with a first report to WP.29 in March 2024. He therefore announced that soon a convocation for a meeting of the experts of the TF AVRS of GRSP would be delivered to GRSP members.

## **XXI. Strategy of the Inland Transport Committee (agenda item 20)**

39. New information was not provided.

## **XXII. Children Left in Cars (agenda item 21)**

*Documentation:* Informal document GRSP-74-15

40. The expert from Australia recalled the past discussion held in GRSP and WP.29, and recommended that action not be circular and move forward. The expert from the Republic of Korea introduced GRSP-74-15 reminding GRSP of the noted discussion, and stressed that the scope of the regulatory discussion on this issue should include passenger vehicles and buses carrying children. He also added that discussions should not be steady but could move vigorously forward. The expert from Canada proposed establishing an ad hoc group with clear ToRs. The expert from the United States of America supported the proposal of the expert from Canada. The experts from Australia and the Republic of Korea proposed to co-chair the group. The expert from China informed GRSP that NCAP China already had protocols to test the original equipment of manufacturers to detect the presence of children, and he offered to co-chair the group. GRSP requested the Chair to highlight this initiative to the WP.29 March 2024 session for endorsement before resuming discussions at its May 2024 session.

## **XXIII. Election of Officers (agenda item 22)**

41. The representatives of the contracting parties, present and voting, unanimously elected Mr. M. Koubek (United States of America) as Chair and Mr. H. G. Kim (Republic of Korea) as Vice-Chair for the sessions of GRSP scheduled in the year 2024.

## **XXIV. Other Business (agenda item 23)**

### **A. Exchange of Information on National and International Requirements on Passive Safety**

*Documentation:* Informal document GRSP-74-18

42. The expert from Japan introduced GRSP-74-18 on heavy-duty trucks with a sleeping berth in the cabin. Since there were not yet any safety regulations in Japan on this subject, he asked for comments to provide a basis for the study and discussion of future requirements in his country. GRSP agreed to resume discussion on this subject at its May 2024 session and requested to their experts to send comments to the expert from Japan.

## **B. UN Regulation No. 0 (International Whole Vehicle Type Approval)**

*Documentation:* Informal documents GRSP-72-07-Rev.1, GRSP-73-58 and GRSP-74-26

43. The expert from Japan, Ambassador of IWVTA, informed GRSP that the Group was developing the 06 series of amendments to UN Regulation No. 0, which had been adopted at the November 2023 session of WP.29. He noted that the series reflected the latest series of amendments to UN Regulations Nos. 12, 127 and 135, which had entered into force in January 2023. He reminded GRSP about GRSP-72-07-Rev.1 on interpreting the preceding series of amendments (singular or plural) mentioned in the transitional provisions of UN Regulations. He informed GRSP that the issue had been discussed in IWVTA IWG, with the intent of a resubmission at the March 2024 session of WP.29. He finally informed GRSP that the IWVTA IWG members at the June 2023 session of the IWG did not have objections or comments on the splitting of UN Regulation No. 16.

44. GRSP resumed discussion on the Unique Identifier (UI) marking. The expert from CITA, introduced GRSP-74-26, to clarify the concept of UI. The expert from the Netherlands expressed the general opinion that UI was not needed in the UN Regulations under the remit of GRSP. He therefore suggested, as previously stated by the expert from Spain (see ECE/TRANS/WP.29/GRSP/73, paragraph 55), that amending the 1958 Agreement would be more viable than amending each UN Regulation to prohibit UI. The expert from OICA agreed with the expert from the Netherlands. Finally, GRSP adopted GRSP-73-58 tabled by the experts from CITA and agreed to send it to the IWG on Database for the Exchange of Type Approval documentation as the final deliberation of GRSP on this subject.

## **C. Highlights of the June and November 2023 Sessions of the World Forum for Harmonization of Vehicle Regulations**

*Documentation:* Informal document GRSP-74-17

45. The Secretary reported on the 190<sup>th</sup> and 191<sup>st</sup> sessions of WP.29.

## **D. Three-dimensional H-point Machine**

*Documentation:* Informal document GRSP-74-37

46. The expert from the Netherlands referred to the discussion on agenda item 16 (see paragraph 33) to introduce a proposal of authorization (GRSP-74-37) for the adaptation of UN Global Technical Regulations (UN GTRs) Nos. 6, 7 and 14 to technical progress – the aim would be to remove references to the three-dimensional H-point machine and to accommodate its drawings and specifications in M.R.1. GRSP adopted GRSP-74-37 and requested the secretariat submit it for the March 2024 session of AC.3.

## **E. Intelligent Transport Systems**

47. New information was not provided.

## **F. Frontal Protection of Buses**

*Documentation:* Informal document GRSP-74-25

48. The expert from Norway provided statistics from 2013 to 2022 in GRSP-74-25. The expert from France supported this activity and stated that data from his country also showed this issue. The expert from the United Kingdom also supported the activity, but requested a closer look at the available data. Finally, the experts from Finland, France, Italy, Sweden and United Kingdom endorsed the activity. GRSP requested its experts to provide further in-depth data at the May 2024 session and requested the secretariat to report at the April 2024 session of the Working Party on General Safety Provisions.

## **G. Exchange of Views of the Future Work of the Working Party on Passive Safety**

*Documentation:* Informal document GRSP-74-27-Rev.1

49. GRSP adopted its revised status of priorities (GRSP-74-27-Rev.1) for the year 2024 and requested the secretariat to submit it to WP.29 for consideration at its March 2024 session.

## **H. UN Regulation No. 22 (Safety helmets)**

*Documentation:* Informal document GRSP-74-04-Rev.1

50. The expert from Italy presented GRSP-74-04-Rev.1 that introduces an alternative speaker simulator for helmet testing. GRSP adopted (GRSP-74-04-Rev.1) as reproduced in annex IX to the report and requested the secretariat to submit it as draft Supplement 3 to the 06 series of amendments to UN Regulation No. 22 to WP.29 and AC.1 session for consideration and vote at their June 2024 sessions.

## **I. UN Regulation No. 153 (Fuel system integrity and electric power train safety at rear-end collision)**

*Documentation:* Informal document GRSP-74-28

51. The expert from France introduced GRSP-74-28 to update the requirements on post-crash electrical safety of UN Regulation No. 153. She explained that the proposal had been submitted for information and comments as the basis of a revised official proposal for the May 2024 session of GRSP. GRSP also noted that if a new replacement proposal was not received by the secretariat, GRSP-74-28 should be confirmed for submission as an official document before the deadline.

## **J. Provisional Agenda for the Next Session**

52. The seventy-fifth session of GRSP was scheduled for Geneva from 27 (2.30 p.m.) to 31 May (12.30 p.m.) 2023. GRSP noted the twelve-week deadline for the submission of official documents to the secretariat as 4 March 2024. GRSP is expected, based on the list of decisions taken to follow:

1. Adoption of the Agenda.
2. UN Global Technical Regulation No. 9 (Pedestrian safety):  
Proposal for Amendment 3.
3. UN Global Technical Regulation No. 13 (Hydrogen and Fuel Cell Vehicles).
4. UN Global Technical Regulation No. 20 (Electric vehicle safety).
5. UN Regulation No. 14 (Anchorages of safety-belts).
6. UN Regulation No. 16 (Safety-belts).
7. UN Regulation No. 17 (Strength of seats).
8. UN Regulation No. 94 (Frontal impact).
9. UN Regulation No. 95 (Lateral impact).
10. UN Regulation No. 100 (Electric power trained vehicles).
11. UN Regulation No. 127 (Pedestrian safety).
12. UN Regulation No. 129 (Enhanced Child Restraint Systems).
13. UN Regulation No. 134 (Hydrogen and Fuel Cell Vehicles).
14. UN Regulation No. 137 (Frontal impact with focus on restraint systems).

15. UN Regulation No. 145 (ISOFIX anchorage systems, ISOFIX top tether anchorages and i-Size).
16. Mutual Resolution No. 1.
17. Equitable Occupant Protection.
18. Securing Children in Buses and Coaches.
19. Exchange of Views on Vehicle Automation.
20. Strategy of the Inland Transport Committee.
21. Children Left in Cars.
22. Three-dimensional H-point Machine;
23. Other Business:
  - (a) Exchange of Information on National and International Requirements on Passive Safety;
  - (b) UN Regulation No. 0 (International Whole Vehicle Type Approval);
  - (c) Highlights of the March 2024 Session of the World Forum for Harmonization of Vehicle Regulations;
  - (d) Intelligent Transport Systems;
  - (e) Frontal Protection of Buses;
  - (f) Exchange of Views on the Future Work of the Working Party on Passive Safety.

## Annex I

[English only]

## Informal Documents (GRSP-74-...)

<i>No.</i>	<i>Transmitted by</i>	<i>Agenda item</i>	<i>Language</i>	<i>Title</i>	<i>Follow-up</i>
01	Spain	18	E	Status Report of the Informal Working Group on Safer Transport of Children in Buses and Coaches (IWG-STCBC)	(a)
02	GRSP Chair	1	E	Running order of the 74 <sup>th</sup> session of the Working Party on Passive Safety	(a)
03	CLEPA	12	E	Ensuring CRS compliance with UN Regulation No. 129	(a)
04/ Rev.1	Italy	21	E	Proposal of Supplement 03 to the 06 series of amendments to UN Regulation No. 22 (Protective helmets)	(d)
05	IWG EqPO	17	E	Report to the 74th session of GRSP	(a)
06	Netherlands	6	E	Proposal for supplement 1 to the [09] Series of Amendments to UN Regulation No. 16 (Safety-belts)	(c)
07	Netherlands	6	E	Definition of rebound phase in UN Regulation No. 16 dynamic test	(a)
08	Netherlands	17	E	IWG EqOP Improvement to existing Regulation UN Regulation No. 17, 10 series of amendments	(a)
09/ Rev.1	Netherlands	16	E	Proposal for Amendment [5] of the Mutual Resolution No. 1 (M.R.1) of the 1958 and the 1998 Agreements	(c)
10	Netherlands	12	E	Guidance supplement 10 to 03 series of UN Regulation No. 129 (ECE/TRANS/WP.29/2023/120)	(a)
11/ Rev.1	IWG on DPPS	2	E	Draft Final Report on the Development of Amendment 3 to UN Global Technical Regulation No. 9 (PEDESTRIAN SAFETY)	(d)
12	TF R134	13	E	Proposal for a corrigendum 1 to the original series of amendments and to the 01 series of amendments to UN Regulation No. 134 (Hydrogen fuel-cell vehicles)	(d)
13	IWG GTR13 PH2	3	E	Proposal for the amendment to ECE/TRANS/WP.29/GRSP/2023/26, proposal for Corrigendum 1 to Amendment 1 to UN Global Technical Regulation No 13 (Hydrogen and Fuel Cell Vehicles)	(d)
14	UN SBR ad-hoc group	6	E	Proposal for the 10 Series of Amendments to UN Regulation No. 16 (Safety-belts)	(c)

<i>No.</i>	<i>Transmitted by</i>	<i>Agenda item</i>	<i>Language</i>	<i>Title</i>	<i>Follow-up</i>
15	Rep. of Korea	21	E	Heatstroke accident data in buses carrying children	(a)
16/ Rev.1	secretariat	1	E	Annotated Provisional Agenda for the Seventy-Fourth Session	(a)
17	secretariat	23(c)	E	Highlights of the June and November 2023 sessions of WP.29	(a)
18	Japan	23(a)	E	Use of a Bed in Trucks While Running	(a)
19	OICA	5	E	Proposal for: Supplement 10 to the 07 Series of Amendments, Supplement 02 to the 08 Series of Amendments and Supplement 03 to the 09 Series of Amendments of UN Regulation No. 14 (Safety-belt anchorages)	(c)
20	OICA	5	E	UN Regulation No. 14: Proposal on Alternative Anchorage Positions	(a)
21	OICA	11	E	Supplement 2 to the 04 series of amendments (and Supplement 3 to the 03 series of amendments) of UN Regulation No. 127 (Pedestrian safety)	(b)
22/ Rev.1	Rep. of Korea	2	E	Proposal for Amendment 3 to UN Global Technical Regulation No. 9 (Pedestrian safety) - Amendments to ECE/TRANS/WP.29/GRSP/2023/31	(d)
23/ Rev.1	Rep. of Korea	16	E	Proposal for Amendment 4 of the Mutual Resolution No. 1 (M.R.1) of the 1958 and the 1998 Agreements - Amendments to ECE/TRANS/WP.29/GRSP/2023/33	(d)
24/ Rev.5	Japan	6	E	Proposal for the 10 Series of Amendments to UN Regulation No. 16 (Safety-belts)	(d)
25	Norway	23(f)	E	Frontal protection in buses	(a)
26	CITA	23(b)	E	74th GRSP Some thoughts about the Unique Identifier 4th – 8th December 2023	(a)
27/ Rev.1	secretariat	16	E	Future Work of the Working Party on Passive Safety	(d)
28	France	23(i)	E	Proposal for the 1 series of amendments to UN Regulation No. 153 (Fuel system integrity and electric power train safety at rear-end collision)	(a)
29/ Rev.1	France	12	E	Proposal for Supplement 11 to the 03 series of amendments and Supplement 1 to the 04 series of amendments to UN Regulation No. 129 (Enhanced Child Restraint Systems)	(d)
30	CLEPA	17	E	Inf EqOP - WHIPLASH improvements for small occupants	(a)
31	Germany	18	E	Proposal for supplement 1 to the [09] Series of Amendments to UN Regulation No. 16 (Safety-belts)	(b)

<i>No.</i>	<i>Transmitted by</i>	<i>Agenda item</i>	<i>Language</i>	<i>Title</i>	<i>Follow-up</i>
32	TF-AVRS	19	E	Status Report of Task Force Automated Vehicles Regulatory Screening of UN Regulations and GTRs under responsibility of GRSP	(a)
33/ Rev.2	Chair of IWG EVS	4	E	Technical Report on the Development of Amendment 1 to UN Global Technical Regulation No. 20, Phase 2 (Electric Vehicle Safety)	(a)
34	Russian Federation	10	E	xEV identification	(a)
35	EC	4	E	Terms of Reference for the Ad-hoc Special Interest Group on model regulation regarding the safety of electric vehicles with a focus on thermal propagation requirements	(b)
36	CLEPA	12	E	Explanatory presentation to .../GRSP/2023/38 – Clarification of test bench vs. bodysHELL testing	(a)
37	Netherlands	23(d)	E	Request for authorization to develop amendments to UN GTRs Nos. 6, 7 and 14	(d)
38	Netherlands	10	E	Amendments to ECE/TRANS/WP.29/GRSP/2023/35	(d)
39	IWG GTR20 PH2	16	E	Status Report Task Force for the implementation of Q UN-Dummies into M.R.1 (TF-QUN)	(a)
40	Japan	6	E	The Idea of the contents about Amendment of R16	(a)

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*Notes:*

- (a) Consideration completed or superseded.
- (b) Continue consideration at the next session with an official symbol.
- (c) Continue consideration at the next session as an informal document.
- (d) Adopted and to be submitted to WP.29.



## Annex II

### UN Global Technical Regulation No. 9 (Pedestrian safety)

#### Amendments adopted to ECE/TRANS/WP.29/GRSP/2023/31 (paragraph 5)

*Section I, Statement of Technical Rationale and Justification,*

**233. IWG-DPPS held the following meetings:**

...

**(z1) 8 and 9 November 2023: virtual.**

247. The expert ...impactor. **Since FlexPLI** was also chosen as verification impactor and the BTA...

...

249. The expert from OICA... **between the Bonnet Leading Edge Reference Line (BLERL) and the Side Reference Line (SRL), ...**

...

254. The expert from Japan presented **Post-Mortem-Human-Subject (PMHS) tests, ...**

...

4. Test procedures for the sensing systems of **DPPS** and selection of the verification impactor

267. For ... with **FlexPLI, representing** the lower extremities ... injuries. **The use of the FlexPLI** as sensing ...

268. Contact ... While most properties of **FlexPLI** were accepted to be very reliable due to its design specifications, two complementary studies were carried out to ensure its **biofidelic and repeatable local stiffness.**

269. The first study, ... **FlexPLI had, ..**

271. The IWG-DPPS concluded that **FlexPLI** was currently ...

276. For **DPPS** ...

288. Concerning the... **In this context, for reasons of likelihood and practicability, it is assumed that HIT always increases with increasing WAD.** Finally, ...

292. Since ... **FlexPLI, which ...**

293. There ... of **FlexPLI** with...

10. List of documents discussed in the TF-DPPS and IWG-DPPS on UN GTR No. 9 Amendment 3

...

**IWG-DPPS-26-01 2 Draft\_agenda**

**IWG-DPPS-26-02 1 Draft minutes**

**IWG-DPPS-26-03 1 GTR9-03 DPPS amendment draft – last modifications with comments**

<b>IWG-DPPS-26-04</b>	<b>1</b>	<b>GTR9-03 DPPS amendment draft – consolidated last modifications-clean</b>
<b>IWG-DPPS-26-05</b>	<b>1</b>	<b>GTR9-03 DPPS final status report – updated for Dec23 GRSP</b>
<b>IWG-DPPS-26-06</b>		<b>MR1 amend 4 draft – consolidated last modifications</b>

*Part II, Text of the Regulation,*

- 3.19. "Detection test area" is the area designated to detect a pedestrian in order **to activate the** deployable system. ... **a distance of 42mm ...**"
- ...
- 3.35. "Sensing **Time ... (FlexPLI)** with ...
- 3.40.3. "Combined testing" means **a mixed** set ... either **statically or dynamically**.
- 3.41. "Testing time" **for static time constraint ... (see Figure 1-2 of Annex 1)**.
- 3.42. "Total Response Time (TRT)" ... **FlexPLI** with ... its **maximum deployment height for the first time**. It is the sum of the **ST and DT**."

## Annex 1

### Test Procedure for the Deployable Pedestrian Protection Systems

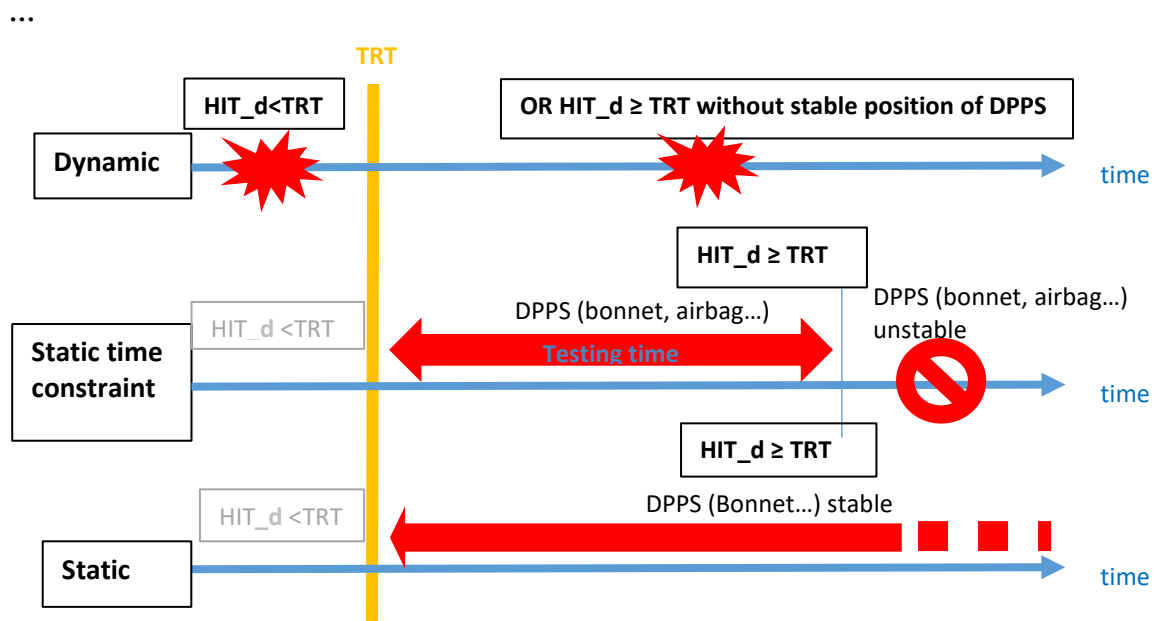
#### 1. Prerequisites

If all **of** the following **prerequisites** are met, the vehicle shall be tested **with the DPPS** activated as intended (**as described below**) for the entire headform test area.

- (a) In case of  $HIT_d < TRT$ , the **headform** test shall be performed **dynamically**;
  - (b) In case of  $HIT_d \geq TRT$ , the **headform** test may be performed either statically at a height no more than the deployed position or **dynamically**.
- 1.1. If any ... the vehicle shall be tested **with DPPS ...**
- 1.2.2. Deployment information:
- ...
- (e) TRT (ST and DT separately) information (for dynamic **testing, ST only**);
  - (f) Evolution of system stability (e.g. pressure or force versus time diagram) (**static testin only**).
- ...
- 1.5. HBM shall be qualified according to Addendum 5 of Mutual Resolution **No. 1 ... Annex 2 of this Regulation...**
- 1.6. Verification ..., **ST and DT** as illustrated ...
- 1.7.1.1. For ... **FlexPLI**, as specified ...

- 1.7.2. A test with **FlexPLI** shall be performed at nominal **velocity (11.1m/s)** at vehicle centreline (Y0).
- 1.7.3. Where ... **but below the lower ...**
- 2.1. TRT... by **using FlexPLI at ... and at the vehicle centreline (Y0).**
- 2.2. ST ... Regulation and **at the vehicle centreline (Y0).**
- 3. Tolerances
  - For verification tests of paragraphs 1.7 and 2 of Annex 1 with **FlexPLI, ...:**
- 4.1. Static test option:
  - If the ... If so, **the headform ...**
  - If ..., **the headform tests ...**
- 4.1.1. Where...selected **pedestrian stature**, as defined in Annex 2, ...
- 4.1.2.1. **Static time constraint condition, linked to the resisting force:**
  - When ... headform **impactor shall ensure ...**

Figure 1-2  
**Timeline for Dynamic, Static Time Constraint and Static Testing Representing Real Life Conditions**



- 4.2.1.2. To enable dynamic testing to be conducted,  $HIT_s$  and **ST** are required
  - ...
  - (b) ST ... at **the vehicle centreline (Y0).**
- 4.3. **"Combined" test option:**
  - ...
  - If ..., as in the A section in ... as in the B section in Figure 1-1, ...

Table 2-3  
 HIT\_d Simulations on **DPPS** in Deployed Mode

Table 2-4  
 HIT\_s Simulations on **DPPS** in Undeployed Mode

**Adopted text based on GRSP-74-11-Rev.1 (paragraph 5)****Final Status Report on the Development of Amendment 3 to UN Global Technical Regulation No. 9 (Pedestrian safety) on Deployable Pedestrian Protection Systems****I. Introduction**

1. The Republic of Korea requested GRSP, as well as WP.29 and AC.3, to transform TF-DPPS into an Informal Working Group on Deployable Pedestrian Protection Systems (IWG-DPPS). WP.29 and AC.3 approved this request at their 174th and fifty-second sessions in March 2018.
2. At the 184th, 187th and 190th sessions of WP.29, WP.29 and AC.3 endorsed the extension of the mandate until November 2022, then November 2023 and recently until May 2024.

**II. Objectives of the Informal Working Group**

3. The objective of IWG-DPPS was to develop proposals for test procedures for DPPS. However, IWG also agreed to develop new and more detailed requirements, where needed, so that the new procedure guarantees that deployable systems are correctly activated as designed to protect pedestrians and other vulnerable road users, and to provide at minimum the same level of protection to pedestrians and other vulnerable road users as non-deployable systems. Consequently, a proposal for the amendment to the relevant sections of UN GTR No. 9 was proposed.

**III. Summary of the Informal Working Group Activities**

4. The organization of IWG was confirmed as:  
Chair: Jinseop PARK (Republic of Korea/ Korea Testing and Research Institute (KATRI))  
Secretary:
  - 1st IWG meeting and 2<sup>nd</sup> IWG meeting: Thomas Kinsky (Opel/ International Organization of Motor Vehicle Manufacturers (OICA))
  - 3rd IWG meeting to 26<sup>th</sup> IWG meeting: Irina Dausse (Renault / International Organization of Motor Vehicle Manufacturers (OICA))

Several subgroups formed to facilitate the in-depth technical discussions on verification impactor, specific headform testing, detection test area, HBM qualification and simulation procedure, etc.

5. Current Generic Vehicle (GV) Models and new Human Body Models (HBM) qualification procedure are available in M.R.1., Addendum 5, and are subject to updates, pending on software versions and agreement from GRSP.
6. A future phase of DPPS might consider the following activities:
  - HIT determination through a generic approach and/or through physical pedestrian dummies testing;
  - other explorations (e.g. non-contact sensors, pedestrian body loading, protection at higher vehicle speeds).
7. Twenty-six meetings were held in Europe (Brussels, Frankfurt, Geneva, London, Paris, as well as a majority of virtual web-meetings).
8. The meetings were attended by representatives of Austria, European Commission, France, Germany, Italy, Japan, Republic of Korea, Netherlands, Spain, United Kingdom,

United States of America, European Association of Automotive Suppliers (CLEPA), International Organization of Motor Vehicle Manufacturers (OICA) and independent experts.

9. IWG submitted the following reports or proposals to GRSP:

<i>Reference</i>	<i>Title</i>
IWG-DPPS-1-03	Terms of Reference for the informal working group of DPPS of GTR No.9, Pedestrian Protection
GRSP-71-26	Intermediate Status report
GRSP-72-11	2nd status report
ECE/TRANS/WP.29/GRSP/2023/31	Proposal for Amendment 3 to Global Technical Regulation No. 9 (Pedestrian Safety)
ECE/TRANS/WP.29/GRSP/2023/33	Proposal for Amendment 4 of the Mutual Resolution No. 1 (M.R.1) of the 1958 and the 1998 Agreements
GRSP-74-22	GTR9-03 informal document complement
GRSP-74-23	MR1 informal document complement
GRSP-74-11	IWG-DPPS final status report on the development of Amendment 3 to UN Global Technical Regulation No. 9 (Pedestrian Safety)

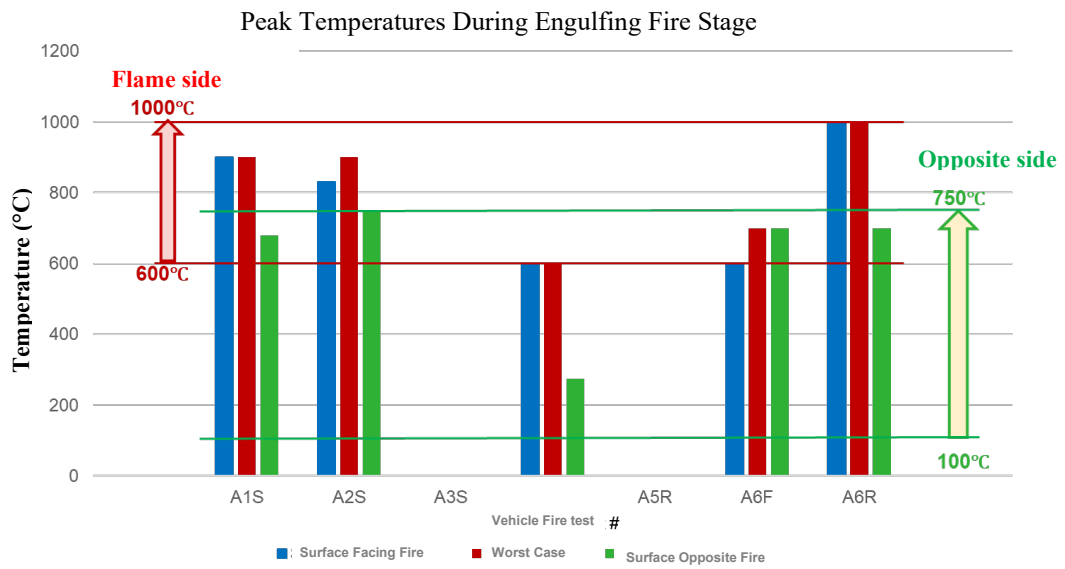
### Annex III

## UN Global Technical Regulation No. 13 (Hydrogen and Fuel Cell Vehicles)

### Amendments adopted to ECE/TRANS/WP.29/GRSP/2023/26 (paragraph 7)

Figure 12 in paragraph 88, amend to read (corrected labels, no changes to values):

"



"

## Annex IV

### UN Regulation No. 16 (Safety-belts)

#### Amendments adopted to ECE/TRANS/WP.29/GRSP/2023/32 (paragraph 19)

*Paragraph 5.3.2., amend to read:*

"5.3.2. An approval number shall be assigned to each type approved **in accordance with Schedule 4 of the Agreement (E/ECE/TRANS/505/Rev.3).**"

*Insert new paragraphs 8.2.3. to 8.2.3.2., to read:*

"8.2.3. The requirement **below relating to** the strap between the buckle **point** and the effective belt anchorage **is only applicable to the rear seating positions of M<sub>1</sub> category vehicles.**

8.2.3.1. The difference between the actual strap length and the straight line distance between the **point** EA and Bd point **shall be 80 mm or less.**

**The above requirements may be shown by the actual vehicle, parts, drawings, or 3D data at the manufacturer's discretion.**

The ... by **the** manufacturer.

8.2.3.2. The requirement of paragraph 8.2.3.1. **shall not apply** if any of the following conditions are satisfied;

- (a) **The safety-belt assembly is equipped with a Pre-loading device;**
- (b) **The manufacturer demonstrates to the satisfaction of the Technical Service through the use of experimental data, simulation, or desktop strength calculations that the buckle strap assembly has the same performance as the requirement in point (c) below;**
- (c) **When the buckle strap assembly is tested using the method described in Annex 19 of this Regulation, the buckle point movement shall be no greater than 80 mm at a tensile load of 1,000 N +/-50 N."**

*Insert new paragraphs 15.7. to 15.7.5., to read:*

"...

15.7.1. ...

15.7.2. **Contracting Parties applying this UN Regulation shall continue to accept type-approvals of vehicles, safety-belts, and restraint systems according to any of the preceding series of amendments, first issued before [1 September 2026], provided the transitional provisions in these respective previous series of amendments foresee this possibility.**

15.7.3. ...

15.7.4. ...

15.7.5. ..."

*Insert new Annex 19., to read*

Annex 19 Tensile Test method of the buckle strap assembly

1. General

1.1. The test procedure in this annex shall be used for the tensile test of the **buckle strap assembly** described in **paragraph 8.2.3.2.** of this **Regulation.**

...

- 2.2.** Fix ..., **such** that the distance between the buckle point and EA point is the same as the straight line distance between the EA and Bd point described in **paragraph 8.2.3.1.** of this **Regulation.**

...

- 2.4.** Perform ...



## Annex V

### UN Regulation No. 100 (Electric power trained vehicles)

#### Amendments adopted to ECE/TRANS/WP.29/GRSP/2023/35 (paragraph 23)

*Insert new paragraphs 12.5. to 12.9., to read:*

- "12.5. As from the official date of entry into force of the 04 series of amendments, no Contracting Party applying this UN Regulation shall refuse to grant or refuse to accept UN type approvals under this UN Regulation as amended by the 04 series of amendments.
- 12.6. As from 1 September 2026, Contracting Parties applying this UN Regulation shall not be obliged to accept UN type approvals to the preceding series of amendments that were first issued on or after 1 September 2026.
- 12.7. Until 1 September 2027, Contracting Parties applying this UN Regulation shall accept UN type approvals to the preceding series of amendments that were first issued before 1 September 2026.
- 12.8. As from 1 September 2027, Contracting Parties applying this Regulation shall not be obliged to accept type approvals issued to the preceding series.
- 12.9. **Notwithstanding paragraph 12.8., Contracting Parties applying this Regulation shall continue to accept type approvals issued according to the 03 series of amendments of this Regulation, for the vehicles and vehicle systems which are not affected by the changes introduced by the 04 series of amendments. "**

*Paragraphs 12.5. and 12.6. (former), renumber as paragraphs 12.10. and 12.11.*

## Annex VI

### **Draft amendment to UN Regulation No. 129 (Enhanced Child Restraint Systems)**

#### **Adopted text based on GRSP-74-29-Rev.1 (paragraph 28)**

*Insert new paragraphs 7.1.3.1.1.8., to read:*

**"7.1.3.1.1.8. When testing a booster cushion in frontal impact tests on the test bench prescribed in Annex 6, an optional dummy protective device, as described in Annex 6 paragraph 3.4., may be installed on the test bench, at the decision of the technical service."**

*Annex 6, Insert new paragraphs 3.4., to read:*

#### **"3.4. Optional dummy protective device**

**An optional dummy protective device may be installed on the test bench for the dynamic frontal test of booster cushion when tested on the test bench described in this Annex.**

**The dummy protective device may be covered with the Polychloropren foam of the lateral impact door as defined in Appendix 3 of this Annex, or an alternative material, at the decision of the technical service.**

**The dimensions of the dummy protective device are given in Appendix 3 of this Annex.**

**The forward face of the dummy protective device shall be parallel with the back of the backrest. The design of the dummy protective device shall be such that it does not interfere with the manikin when positioned on the test bench. Furthermore, the dummy protective device shall not interfere with the dummy and/or the adult 3-point belt during the dynamic test until the maximum horizontal head excursion has been reached.**

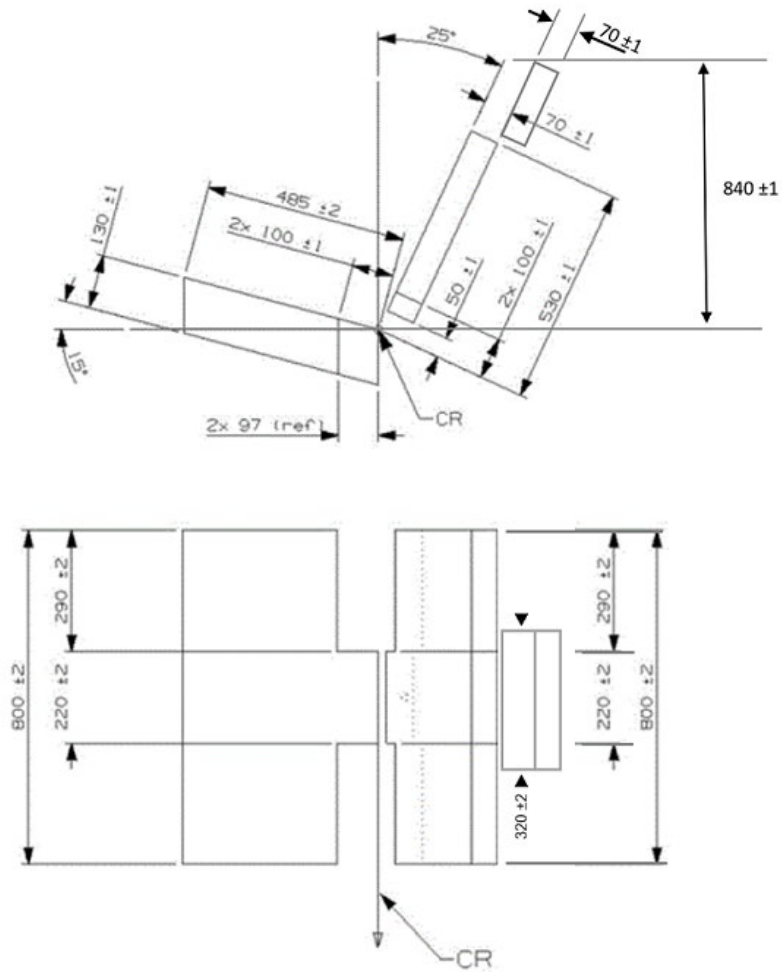
**Any other device giving equivalent results can be accepted."**

Insert new Annex 6 – Appendix 5, to read:

## " Annex 6 - Appendix 5

### Optional Dummy Protective Device

Figure 1



"

## Annex VII

### UN Regulation No. 134 (Hydrogen and Fuel Cells Vehicles)

#### Adopted text based on GRSP-74-12 (paragraph 29)

*Annex 4, Paragraph 1.4.*, amend to read:

"1.4. Salt corrosion resistance test

Two TPRD units are tested. Any non-permanent outlet caps are removed. Each TPRD unit is installed in a test fixture in accordance with the manufacturer's recommended procedure so that external exposure is consistent with realistic installation. Each unit is exposed for 500 hours to a salt spray (fog) test as specified in ASTM B117 (Standard Practice for Operating Salt Spray (Fog) Apparatus) except that in the test of one unit, the pH of the salt solution shall be adjusted to  $4.0 \pm 0.2$  by the addition of sulphuric acid and nitric acid in a 2:1 ratio, and in the test of the other unit, the pH of the salt solution shall be adjusted to  $10.0 \pm 0.2$  by the addition of sodium hydroxide. The temperature within the fog chamber is maintained at 30-35 °C).

Following these tests, each pressure relief device shall comply with the requirements of Leak test (**Annex 4, paragraph 1.8.**), Flow rate test (**Annex 4, paragraph 1.10.**) and Bench top activation test (**Annex 4, paragraph 1.9.**)."

## Annex VIII

### Mutual Resolution No. 1

#### Amendments adopted to ECE/TRANS/WP.29/GRSP/2023/33 (paragraph 32)

Contents, amend to read:

#### "Contents

1. General Provisions .....	Page "
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Paragraph 1, amend to read:

#### "1. General Provisions

This Addendum provides the specifications for the Human Body Models (HBMs) related to the Head Impact Time (HIT) Determination Procedure defined in GTR No.9 Annex 2. The HBM qualification procedure and all related tools, as requested in Annex 1 of GTR No.9 are specified in this **Addendum.**"

Paragraph 2.1.2., amend to read:

##### "2.1.2. Positioning

The ... The angles shall be measured using the reference axis as **defined in Annex A.** **The** reference measures for the other sizes of models are listed in Table 2-2.

The right ... shall ideally contact the ground – if **the height of Acetabulum (ACz)** (see table 2-1)

..."

Figure 2-1, amend to read:

Figure 2-2

Measurements to describe the initial posture of the HBM. For all abbreviations and reference point description (HC, AC etc.) see **Annex A.**

Table 2-10, amend to read:

"Table 2-10

#### Reference Nodes Used for Determination of the Initial Posture for Human Body Models Where Anatomic Landmarks Cannot Be Defined

<i>HBM with full skeleton</i>	<i>HBM without skeleton</i>
HC	Centre of gravity of the body/bodies representing the <b>full head</b>
...	..."

## Annex IX

### UN Regulation No. 22 (Safety helmets)

#### Adopted text based on GRSP-74-04-Rev.1 (paragraph 50)

*Paragraph 5.1.4.1.2.3.1. amend to read:*

"5.1.4.1.2.3.1. For universal accessory ready helmet, an additional one or various of the following symbols if applicable, separated by a dash:

"UA" if the helmet is ready for universal accessories.

"S" or "S45":

"S" if the helmet has been tested with **rigid or deformable** speaker simulators of 40 mm diameter **as defined in Annex 20** or

"S45" if the helmet has been tested with **rigid or deformable** speaker simulators of 45 mm diameter **as defined in Annex 20** or

"M" if the helmet has been tested with microphone simulator **rigid or deformable**.

"F" if the helmet can install an accessory in the front side area.

"L" if the helmet can install an accessory in the side area.

"R" if the helmet can install an accessory in the rear area."

*Annex 20, insert new paragraphs 1.4.2. to 1.4.2.1.2. in Annex 20, to read:*

**1.4.2. Definition of rigid speaker simulator**

**1.4.2.1. Component and material specifications**

**1.4.2.1.1. Dimensions of rigid speaker simulator 40 mm**

**Diameter: 40 mm**

**Tolerance: +0-1 mm**

**Thickness: 8 mm ± 0.07 mm**

**Material: rigid plastic PA 6 Nylon 6**

**1.4.2.1.2. Dimensions of rigid speaker simulator 45 mm**

**Diameter: 45 mm**

**Tolerance: +0-1 mm**

**Thickness: 8 mm ± 0.07 mm**

**Material: rigid plastic PA 6 Nylon 6"**

*Paragraph 1.4.2. (former), renumber as 1.4.3.*

*Annex 1A, insert new paragraph 14.1., to read:*

**"14.1. If S40 or S45, speaker dummy used for the homologation test deformable/rigid<sup>2</sup>"**

*Remark:*

<sup>2</sup> Strike out what does not apply

## Annex X

[English only]

## Informal Working Groups

<i>Informal Working Group</i>	<i>Chair</i>	<i>Expiry date of the mandate [pending WP.29 decision]</i>	<i>Secretary</i>
UN GTR No. 9 on Pedestrian Safety Deployable – Pedestrian Protection Systems (DPPS)	Mr. Jin Seop PARK (Republic of Korea)	May 2024	OICA
UN GTR No. 20 (EVS) – Phase 2	Mr. Martin KOUBEK (USA) and vice-chaired by EC, China and Japan	[December 2023]	Japan
UN GTR No. 13 (HFCV) – Phase 2	Mr. Martin KOUBEK (USA) (co-chaired by Japan and vice-chaired by China and the Republic of Korea)	June 2024	[...]
Protective helmets	Mr. Luca ROCCO (Italy)	Suspended	
Securing children in buses and coaches	Ms. Marta ANGLES (Spain)	March 2024	
Equitable Occupant Protection (EqOP)	Ms. Pernilla BREMER (Sweden)	December 2027	CLEPA