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Report of the Working Party on Passive Safety on its fifty-third session

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I. Attendance

1. The Working Party on Passive Safety (GRSP) held its fifty-third session in Geneva from 13 to 17 May 2013, chaired by Ms. M. Versailles (United States of America). Experts from the following countries participated in the work following Rule 1(a) of the Rules of Procedure of the World Forum for Harmonization of Vehicle Regulations (WP.29) (TRANS/WP.29/690 and Amend.1): Australia; Canada; China; France; Germany; Hungary; India; Italy; Japan; Netherlands; Norway; Republic of Korea; Russian Federation; South Africa; Spain; Sweden; Switzerland; United Kingdom of Great Britain and Northern Ireland and United States of America. An expert from the European Commission (EC) participated. Experts from the following non-governmental organizations participated: Consumers International (CI); European Association of Automotive Suppliers (CLEPA); Foundation for the Automobile and Society (FIA Foundation); International Organization of Motor Vehicle Manufacturers (OICA) and International Motorcycle Manufacturers Association (IMMA).
2. The informal documents distributed during the session are listed in Annex I to this report.

II. Adoption of the agenda (agenda item 1)

Documentation: ECE/TRANS/WP.29/GRSP/2013/1
Informal document GRSP-53-01

3. GRSP considered and adopted the agenda (ECE/TRANS/WP.29/GRSP/2013/1) proposed for the fifty-third session with the new agenda item 21(h), 22 and 23 as well as the running order (GRSP-53-01). The list of GRSP informal working groups (IWGs) is contained in Annex IX to this report.

III. Global technical regulation No. 7 (Head restraints) (agenda item 2)

Documentation: Informal documents GRSP-53-06, GRSP-53-14, GRSP-53-15, GRSP-53-16 and GRSP-53-17

4. The expert from the United Kingdom, Chair of the IWG on UN Global Technical Regulation (UN GTR) No. 7 Phase 2, informed GRSP about the work progress (GRSP-53-14) of his group. He added that the last meeting of the group had been held on 23-24 April 2013 in Paris and that two further WebEX meetings would be held before the summer to advance the drafting. He explained that as a result of its activities the group agreed on:
 - (a) An effective head restraint height measurement procedure whose thresholds for an absolute height would be returned to GRSP for final decision.
 - (b) An appropriate dynamic test, including the test procedure, injury criteria and the associated corridors for the Biofidelic Rear Impact Dummy (BioRID II).
5. He questioned if new tolerances for the three-dimensional H point machines (3-D "H") should be specified and, if so, whether these should be specific to UN GTR No. 7 (and UN Regulation No. 17) or for all UN Regulations and UN GTRs where the machine is used. He welcomed suggestion on how to proceed for its establishment in the Mutual Resolution (M.R.1) accordingly. He announced that a draft UN GTR would be submitted officially for the December 2013 session of GRSP and introduced a first draft for

information (GRSP-53-06). He concluded that the IWG expected to finalize complementary proposals to introduce the injury criteria in the UN GTR and the Biofidelic Rear Impact Dummy (BioRID II) as Addendum 1 to the M.R.1 in time for the next GRSP session. GRSP noted that a guideline proposal to insert tools into the M.R.1, based on the example of BioRID II, would be also circulated at the next session.

6. The expert from the Netherlands introduced rationales (GRSP-53-17) to justify the proposal (GRSP-53-15), for information only, to increase the height of head restraints up to 830 mm in at least one position of head restraint adjustment and not less than 720 mm in any position of head restraint adjustment. He also provided an overview on the measuring method for effective head restraint height (GRSP-53-16). The expert from OICA reminded GRSP that the new measurement procedure would reduce the measured height by 20 mm (therefore making the current limit, as it stands, more severe), and this should be taken into consideration for establishing new height thresholds. The expert from the United Kingdom encouraged cost benefit analysis to justify the proposed thresholds.

7. Finally, GRSP agreed to resume consideration of this agenda item on the basis of final proposals submitted by the IWG.

IV. Global technical regulation No. 9 (Pedestrian safety) (agenda item 3)

A. Phase 2 of the global technical regulation

Documentation: ECE/TRANS/WP.29/AC.3/24
ECE/TRANS/WP.29/GRSP/2011/13
Informal documents GRSP-53-28 and GRSP-53-29

8. The expert from Germany, co-Chair of the IWG on pedestrian safety introduced the fourth progress report of the group (GRSP-53-28) and announced a first draft UN GTR (GRSP-53-29), published on GRSP website for information only after the session of GRSP. He added that the group had made good progress and that it was ready to submit an official proposal to the December session of GRSP with possible pending decisions on threshold values of injury criteria. GRSP agreed to resume consideration of this subject on the basis of a proposal submitted by the IWG.

B. Proposal for Amendment 2

Documentation: ECE/TRANS/WP.29/AC.3/31
ECE/TRANS/WP.29/GRSP/2012/2
ECE/TRANS/WP.29/GRSP/2012/14

9. As the United States was not represented by an expert, the Chair announced that she was not in a position to present a proposal to solve the study reservation raised by her country at the prior session to the proposed amendment to the UN GTR (ECE/TRANS/WP.29/AC.3/31 and ECE/TRANS/WP.29/GRSP/2012/14). GRSP agreed to resume consideration of this subject at its December 2013 session. It was also agreed to seek guidance to the June 2013 session of the Administrative Committee for the Coordination of Work (WP.29/AC.2) about the possible simultaneous adoption of the two proposed amendments to the UN GTR (Phase 2 and Amendment 2); OICA noted that Amendment 2 needs to apply to both Phase 1 and Phase 2 of the UN GTR.

V. Side impact (agenda item 4)

A. Draft global technical regulation on Pole Side Impact

Documentation: ECE/TRANS/WP.29/AC.3/28
ECE/TRANS/WP.29/GRSP/2013/2
ECE/TRANS/WP.29/GRSP/2013/7
Informal document GRSP-53-04-Rev.1, GRSP-53-05, GRSP-53-13,
GRSP-53-19 and GRSP-53-23

10. The expert from Australia, Chair of the IWG on Pole Side Impact (PSI), introduced ECE/TRANS/WP.29/GRSP/2013/7 and GRSP-53-05, superseding ECE/TRANS/WP.29/GRSP/2013/2, as the official draft UN GTR proposed by his group. He also introduced the final progress report of the group (GRSP-53-04-Rev.1). The proposal received some comments such as GRSP-53-13, tabled by the expert from the United States and GRSP-53-19 by the expert from France. Moreover, the American expert raised a study reservation on the seating procedure for the World Side Impact 50th percentile male test dummy (WorldSID) (paras. 5.6 to 5.13 of Annex 2 of the text of the Regulation). GRSP also noted that a parallel proposal to the M.R.1 to introduce the WorldSID would be submitted at a later stage to GRSP and to WP.29 for adoption. It was agreed as a provisional solution to refer drawings and specifications of the dummy to the pertaining International Standard Organization (ISO) website. (<http://standards.iso.org/iso/15830>). Accordingly, it was agreed to seek guidance at the June 2013 session of WP.29/AC.2 on this subject. GRSP considered GRSP-53-23 consolidating all the changes agreed upon the discussion.

11. Finally, GRSP recommended ECE/TRANS/WP.29/GRSP/2013/7, as amended by Annex II of this report and GRSP-53-04-Rev.1 (final report of the IWG as reproduced in Annex II to this report) for their establishment in the Global Registry. The secretariat was requested to submit the proposal and its final report to the Executive Committee of the 1998 Agreement (AC.3) for consideration and vote at its November 2013 session. GRSP also agreed to circulate by August 2013 a possible proposal for electronic ballot via e-mail to GRSP experts, tabled by the expert from the United States and concerning a revised test seating position of the WorldSID.

12. GRSP noted that some of its experts were more in favour at transposing the future UN GTR into a new UN Regulation under the 1958 Agreement rather than amend UN Regulation No. 95. GRSP agreed to provide better guidance at its December 2013 session to the expert from Australia who had volunteered to undertake the task to develop a proposal.

B. Harmonization of side impact dummies

Documentation: ECE/TRANS/WP.29/AC.3/28

13. The expert from the United States, Chair of the IWG on harmonization of side impact dummies, gave an oral report on the progress of work of the group. She clarified that while the development of the pole side impact UN GTR had been finalized, the drafting of the addendum for the M.R.1 was currently on hold for two main reasons:

(a) While the drawing package of the WorldSID 50th percentile was public, the copyright on other documents needed for the addendum was held by ISO. She informed

GRSP that ISO had agreed to make these available free of charge if used in the UN GTR, but would prefer that they were incorporated by reference rather than copied.

(b) National Highway Transport Safety Administration had conducted some high-speed pendulum tests and discovered that contact had occurred between the pelvis and the lumbar spine. Because of the higher severity of the pendulum test than the UN GTR test, she clarified that it would not be an issue. However, she stated that laboratories had conducted follow-up tests to investigate and determine if it would be an issue and the outcome of this research would be announced at the next session of GRSP.

14. Finally, she stated that her group believed that WorldSID dummy would be ready for incorporation into the PSI UN GTR as a reliable test tool and that a solution should be found for an alternate reference to the location of the dummy information until the addendum to the M.R.1. would be approved (see para. 10 above).

VI. Global technical regulation on electric vehicles (agenda item 5)

15. The Chair of GRSP, on behalf of the Chair of the IWG on Electric Vehicle Safety (EVS) made an oral report of the third meeting of the group held on 16-18, October, 2013 in Tokyo. She explained that the activity of the IWG focused on three major items:

(a) It had been agreed an outline of the draft UN GTR to provide a comprehensive approach ensuring the IWG would address all safety concerns.

(b) The group examined and addressed some comments and questions to the rationale section tabled by the expert from OICA. Other comments on remaining issues would be addressed at later stage.

(c) Option 1 – two phases approach and Option 2 – single step approach of the road map to develop the UN GTR had also been discussed. She added that the timeline, as stated in the action plan, would be very difficult for finalizing the UN GTR by 2014 regardless of which approach would be followed.

16. She concluded that the group would take a decision on the roadmap at its next meeting on 14-16 October 2013 in China and would introduce it to WP.29 for endorsement.

VII. Crash compatibility (agenda item 6)

17. No new information was provided for this agenda item.

VIII. Hydrogen and fuel cell vehicles (agenda item 7)

18. The Chair of GRSP, on behalf of the Chair of the informal working subgroup safety (SGS), clarified that so far she had not been in a position to provide information on the future commitment of the SGS on Phase 2 of the UN GTR.

19. Finally, GRSP noted that the expert from OICA in cooperation with the expert from the European Commission had volunteered to prepare a draft proposal of a UN Regulation to address the transposition issue of the UN GTR into the 1958 Agreement. GRSP agreed to resume discussion on this subject based on a proposal tabled by the experts from the European Commission and OICA, if available.

IX. Regulation No. 14 (Safety-belt anchorages) (agenda item 8)

Documentation: ECE/TRANS/WP.29/GRSP/2013/3
ECE/TRANS/WP.29/GRSP/2013/4
Informal document GRSP-53-11

20. The expert from OICA introduced ECE/TRANS/WP.29/GRSP/2013/3, aimed at introducing exemptions for vehicles not intended to transport children during normal use. The expert from United Kingdom suggested that the proposal should include amendments to the type approval certificate (Annex 1 of the UN Regulation) which clearly address this exemption. Finally, GRSP adopted ECE/TRANS/WP.29/GRSP/2013/3 as amended by Annex III to this report and requested the secretariat to submit it to WP.29 and AC.1, for consideration and vote at their November 2013 sessions as draft Supplement 5 to the 07 series of amendments to the UN Regulation.

21. GRSP considered ECE/TRANS/WP.29/GRSP/2013/4 aimed at exempting vehicles with one seating position per row from ISOFIX provisions. He justified that new concepts designed for urban mobility would not technically allow the installation of ISOFIX anchorages. The proposal received comments from the German expert (GRSP-53-11) arguing that the ISOFIX system should be promoted as much as possible in a broad range of vehicle configurations. The expert from OICA argued that GRSP-53-11 would not consider the consequences of vehicle weight increase (approximately 1 kg) and national legislation in several countries that forbid the transport of children on front seats. In principle, GRSP agreed to further study the ISOFIX requirements to address new mobility solutions. Thereby, GRSP agreed to resume discussion at its December 2013 session, based on comments (i.e. list of concept vehicle configurations) provided by the IWG on child restraints systems (CRS) and from the experts of Contracting Parties to the 1958 Agreement. Moreover, the secretariat was requested to distribute GRSP-53-11 with an official symbol and to have ECE/TRANS/WP.29/GRSP/2011/9 as a reference on the agenda of the next session.

X. Regulation No. 16 (Safety-belts) (agenda item 9)

Documentation: ECE/TRANS/WP.29/GRSP/2012/25
ECE/TRANS/WP.29/GRSP/2013/8
ECE/TRANS/WP.29/GRSP/2013/13
Informal document GRSP-51-14

22. The expert from Sweden introduced ECE/TRANS/WP.29/GRSP/2013/8 harmonizing UN Regulation No. 16 with UN Regulation No. 94 concerning the warning label provisions on risks of installing a rear-facing CRS in a seating position equipped with air bag. The expert from OICA introduced ECE/TRANS/WP.29/GRSP/2013/13, proposing an alternative solution.

23. Finally, GRSP was more in favour of a proposal fully aligning the two above-mentioned UN Regulations and adopted ECE/TRANS/WP.29/GRSP/2013/8 as amended by Annex IV to this report. The secretariat was requested to submit the proposal to WP.29 and AC.1, for consideration and vote at their November 2013 sessions as draft Supplement 5 to the 06 series of amendments to the UN Regulation.

24. GRSP agreed to defer discussion on ECE/TRANS/WP.29/GRSP/2012/25 to its December 2013 session awaiting a complementary proposal tabled by the expert from OICA.

XI. Regulation No. 17 (Strength of seats) (agenda item 10)

Documentation: ECE/TRANS/WP.29/GRSP/2013/5
ECE/TRANS/WP.29/GRSP/2011/10

25. Referring to the decision taken at its previous session, GRSP agreed to defer discussion on the transposition of the UN GTR No. 7 into the UN Regulation No. 17 (keeping as basis ECE/TRANS/WP.29/GRSP/2009/15 in the agenda of its future sessions) and await a concrete proposal from the IWG on UN GTR No. 7 Phase 2.

26. GRSP considered ECE/TRANS/WP.29/GRSP/2013/5, superseding ECE/TRANS/WP.29/GRSP/2011/10, on new provisions for folding seats. GRSP adopted ECE/TRANS/WP.29/GRSP/2013/5, as amended by Annex V to this report. GRSP requested the secretariat to submit the proposal to WP.29 and AC.1, for consideration and vote at their November 2013 sessions as draft Supplement 2 to the 08 series of amendments to the UN Regulation.

XII. Regulation No. 22 (Protective helmets) (agenda item 11)

27. No new information was provided for this agenda item. However, the expert from the FIA Foundation requested the secretariat to keep this item in the agenda of the future session of GRSP for possible new information.

XIII. Regulation No. 29 (Cabs of commercial vehicles) (agenda item 12)

Documentation: ECE/TRANS/WP.29/GRSP/2013/9
ECE/TRANS/WP.29/GRSP/2012/19
Informal documents GRSP-53-02 and GRSP-53-03

28. The expert from Sweden introduced ECE/TRANS/WP.29/GRSP/2013/9, containing an alternative to the proposal for expanding the scope of the UN Regulation to all N categories of vehicles, as suggested by the expert from the Russian Federation (ECE/TRANS/WP.29/GRSP/2012/19). The expert from OICA introduced GRSP-53-02, providing a layout of a possible testing configuration for each configuration of N categories. He stated that these different configurations make unfeasible the application of all tests to all N types. The expert from the Russian Federation introduced GRSP-53-02 to stress that all vehicle of category N (even N₁ category of vehicle) should be covered by UN Regulation No. 29 and proposed to assess with GRSP experts which of the test configurations (A, B and C) of the UN Regulation should be applied to each N vehicle category.

29. Finally, GRSP agreed to resume consideration on this subject at its December 2013 session on the basis of a possible joint proposal prepared by the experts from the Russian Federation, Sweden and OICA.

XIV. Regulation No. 44 (Child restraint systems) (agenda item 13)

Documentation: ECE/TRANS/WP.29/GRSP/2013/10

30. The expert from Japan introduced ECE/TRANS/WP.29/GRSP/2013/10 aimed at extending the range of application of the overturning test on a broader range of child restraints systems (CRS).

31. On suggestion of the expert from France, GRSP agreed to keep ECE/TRANS/WP.29/GRSP/2013/10 in the agenda of the next session to consolidate all the amendments needed to align UN Regulation No. 44 to the UN Regulation on Enhanced Child Restraint Systems (ECRS).

32. Finally, the expert from Hungary informed GRSP that the procedure of withdrawing the type approval of the belt guide device granted as a CRS according to UN Regulation No. 44 had been started but not yet completed.

XV. Regulation No. 94 (Frontal collision) (agenda item 14)

Documentation: Informal documents GRSP-53-20, GRSP-53-25, GRSP-53-26 and GRSP-53-27

33. The expert from France introduced the status report of the IWG (GRSP-53-25). He confirmed the intention of the group to submit a draft proposal of amendments to the UN Regulation for the May 2014 session of GRSP. He added that due to the lack of supplementary tests to validate reproducibility and repeatability of the test with the full-width deformable barrier (FWDB), the group had decided to finalize the proposal with the use of the full-width rigid barrier (FWRB) for the first phase of amendments. He explained that the proposal would introduce an additional crash test with one hundred per cent of overlap of the tested vehicle with a FWRB, by using as assessment tools a fifty percentile male dummy (hybrid III) on the driver seat and a fifth percentile dummy on the front passenger seat. He added that this configuration of testing focused on elderly occupants' injury risk curves. He concluded that pending issues would still be addressed by the IWG:

- (a) The definition of dummies and parts;
- (b) The choice of the worst case of test vehicle configuration;
- (c) Repetition of structural assessments (i.e. fuel leakage) in both configuration of testing (FWDB and offset deformable barrier (ODB));
- (d) Preparation of a complementary proposal of amendments to UN Regulation No. 42 (Front and rear protection devices) to address geometric assessment;
- (e) Transitional provisions.

34. He concluded by introducing for information only, a draft proposal (GRSP-53-26), that would be submitted as an official document for the December 2013 session of GRSP. The experts from Japan introduced GRSP-53-20, supporting the configuration of the test proposed by the IWG. However, he argued that there are no evidence showing difference in the age and gender ratio of occupants due to the difference of crash configuration between the FWRB and offset deformable barrier (ODB) tests. The expert from Germany raised similar concerns. GRSP agreed, to resume discussion on this agenda item at its December 2013 session, based on an official proposal submitted by the IWG incorporating the comments received and further outcomes of the IWG.

35. Finally, GRSP adopted GRSP-53-27, as reproduced in Annex VI to this report, aligning the same text adopted for the warning air bag labelling under UN Regulation No. 16 (see para. 23). The secretariat was requested to submit the proposal to WP.29 and AC.1 as draft Supplement 5 to the 01 series of amendments and as draft Supplement 5 to the 02 series of amendments to the UN Regulation.

XVI. Regulation No. 95 (Lateral collision) (agenda item 15)

36. No new information was provided for this agenda item.

XVII. Regulation No. 100 (Construction and functional safety of battery electric vehicles) (agenda item 16)

Documentation: ECE/TRANS/WP.29/GRSP/2013/11
Informal document GRSP-53-10

37. The expert from Germany, on behalf of the Chair of the IWG on Rechargeable Energy Storage System (REESS) introduced the work progress of the group (GRSP-53-10). He informed GRSP that the group was working on the basis of the new terms of reference which extend the work to category L vehicles. He concluded that the secretariat services were undertaken by the expert from OICA and that the next meeting of the IWG was scheduled for 21 May 2013, in Paris.

38. Finally, GRSP considered and adopted ECE/TRANS/WP.29/GRSP/2013/11, not amended, to remove unnecessary constraints to electric vehicle systems having a working voltage of 48 V. GRSP requested the secretariat to submit it to WP.29 and AC.1 as draft Supplement 3 to the 01 series of amendments and as draft Supplement 1 to the 02 series of amendments to UN Regulation No. 100 at their November 2013 sessions.

XVIII. Buses and coaches (agenda item 17)

Documentation: Informal documents GRSP-53-07 and GRSP-53-08

39. The expert from Japan made a presentation (GRSP-53-08) on the introduction of guidelines in Japan for the improvement safety on vehicles dedicated to the transport of children (GRSP-53-07). The Chair of GRSP invited experts to provide comments concerning GRSP-53-07 to the expert from Japan by the December 2013 session of GRSP.

XIX. Regulation No. 127 (Pedestrian safety) (agenda item 18)

A. Proposal for Supplement 1 to Regulation No. 127

Documentation: ECE/TRANS/WP.29/GRSP/2011/18
ECE/TRANS/WP.29/GRSP/2011/19

40. With reference to the discussion under agenda item 3(b) (see para. 9), GRSP agreed to defer discussion on this agenda item to its December 2013 session.

B. Proposal for the 01 series of amendments to Regulation No. 127

Documentation: ECE/TRANS/WP.29/GRSP/2011/14
ECE/TRANS/WP.29/GRSP/2011/20

41. GRSP agreed to defer discussion on this agenda item awaiting an official proposal of the IWG.

XX. New Regulation on Enhanced Child Restraint Systems (agenda item 19)

Documentation: ECE/TRANS/WP.29/GRSP/2013/12
Informal documents GRSP-53-21, GRSP-53-22 and GRSP-53-24

42. The expert from France, Chair of the IWG on ECRS, introduced the status report of the progress of his group (GRSP-53-22). He informed GRSP that the IWG would finalize a proposal concerning the Phase 2 of the UN Regulation by the December 2013 session of GRSP and introduced a draft proposal for information (GRSP-53-21). He clarified that this phase would: (i) incorporate non-integral CRS (using adult safety-belts), (ii) revision of the test pulse for frontal impact and (iii) review the application of injury criteria related to Q dummies. He finally sought guidance from GRSP for the development of the Phase 3, namely the necessary upgrade of UN Regulation No. 44 and the introduction of transitional provisions to withdraw ISOFIX provisions from this last.

43. The expert from CI expressed his preference for a unique UN Regulation focused on i-size CRS type and to phase out UN Regulation No. 44. The expert from OICA raised concerns on consumer information since the current and future vehicle fleet and its owner manuals would still refer to UN Regulation No. 44. The expert from Germany suggested that a list showing compatibility of current vehicles with i-size CRS would be provided to consumers. Moreover, he added that he was in favor of bringing all provisions in one UN Regulation, otherwise the decision of keeping non-ISOFIX provisions in UN Regulation No. 44 and those ISOFIX in UN Regulation on ECRS would mislead consumer choice. The expert from France stressed that the introduction of the i-size CRS would not degrade safety even in this transition period; on the contrary the use of ECRS in the new car assessment program (NCAP) would be an incentive for manufacturers to adapt vehicles to i-size CRS. Finally, GRSP agreed to resume consideration of the development of Phase 3 at its December 2013 session.

44. GRSP considered and adopted ECE/TRANS/WP.29/GRSP/2013/12, as amended by Annex VII to this report, introducing all the modifications agreed by the IWG, including alignment to new provisions recently introduced into UN Regulation No. 44. The secretariat was requested to submit the proposal to WP.29 and AC.1 as draft Supplement 2 to UN Regulation on ECRS at their November 2013 sessions.

45. GRSP noted GRSP-53-24, tabled by the expert from CLEPA and providing an analysis of the future i-size type approval possibilities. Particularly, he sought advice on a configuration of CRS combining a base attached with ISOFIX anchorages to the vehicle (with a support leg) and a shell installed on it; the shell at the choice of the user could be used, without the base and secured by adult safety belts. The experts from France and CI suggested that on exceptional basis, the complete configuration should receive an i-size type approval while the shell should be type approved according to UN Regulation No. 44. However, GRSP agreed to address this issue to the IWG on CRS, before taking a final decision.

46. Finally, the expert from EC informed GRSP about the information campaign that would be started shortly at the European level to sponsor the use of i-size CRS. GRSP agreed on the importance of coordinated information campaigns (e.g. brochures and videos) to promote the new CRS and encouraged sharing information on modality and planning of these initiatives. GRSP agreed to resume consideration of this agenda item on the basis of an official proposal of amendments on Phase 2 and on a draft proposal of brochure text submitted by the IWG.

XXI. Collective amendments – Regulations Nos. 12, 94 and 95 (agenda item 20)

Documentation: ECE/TRANS/WP.29/GRSP/2013/6

47. GRSP adopted ECE/TRANS/WP.29/GRSP/2013/6, as amended by Annex VIII to this report and proposing provisions for the coupling systems for charging the REESS. The secretariat was requested to submit the proposal to WP.29 and AC.1, for consideration and vote at their November 2013 sessions as draft Supplement 3 to the 04 series of amendments to the UN Regulation No. 12, as part of (see para. 35) draft Supplement 5 to the 02 series of amendments to UN Regulation No. 94 and as draft Supplement 4 to the 03 series of amendments to UN Regulation No. 95.

XXII. Other business (agenda item 21)

A. Exchange of information on national and international requirements on passive safety

Documentation: Informal document GRSP-53-18

48. The expert from the FIA Foundation introduced GRSP-53-18, providing an overview of the organization and latest results of the ASEAN NCAP.

B. 1997 Agreement (Inspections) – Development of Rule No. 2

Documentation: ECE/TRANS/WP.29/2013/32
ECE/TRANS/WP.29/2013/64

49. GRSP endorsed ECE/TRANS/WP.29/2013/32, not amended, aimed at reducing differences between UN Rule No. 2 (roadworthiness) and the corresponding EU directives. GRSP requested the secretariat to submit the proposal to WP.29 as draft Revision 1 to UN Rule No. 2. GRSP also considered ECE/TRANS/WP.29/2013/64 (draft Revision 2 to Rule No. 1(environment)), for the safety aspect related to the fluid leaks. GRSP did not raise any comment to the proposal.

C. Intelligent Transport Systems (ITS)

Documentation: Informal document GRSP-52-10

50. GRSP confirmed that GRSP-52-10 already included the amendments agreed upon by its experts on the proposal dealing with design/control principles of Advanced Driver Assistance Systems (WP.29-157-06) and no further comments were provided.

D. Quiet Road Transport Vehicles (QRTV)

Documentation: ECE/TRANS/WP.29/AC.3/33

51. The Chair of GRSP, on behalf of the Chair of the IWG, informed GRSP about the third meeting of the IWG on QRTV held in Brussels 16-18 April 2013 at the headquarters of the European Automobile Manufacturers' Association (ACEA). She informed GRSP that the main discussion included the start of a framework for the draft UN GTR. Therefore, the group considered the recent Notice of Proposed Rule Making published by the National Highway Traffic Administration (NHTSA), on minimum sound emissions for electric and hybrid-electric vehicles and a Japanese proposal seeking to use its national guidelines as a basis for the UN GTR. However, she added that the IWG had not yet started discussion on performance requirements, test procedures or limit values. GRSP noted that the next meeting of the IWG was scheduled on 16 - 18 July 2013, at NHTSA headquarters.

E. Definition and acronyms in Regulations under GRSP responsibilities on the basis of an initiative of the Working Party on Pollution and Energy

52. GRSP renewed recommendation to the Chairs of its IWGs to send comments to the expert from EC concerning the provisional list of acronyms (GRSP-51-03) he was preparing and complete it with those that were missing. GRSP agreed to resume consideration on this subject at its December 2013 session.

F. Development of the International Whole Vehicle Type Approval (IWVTA) system and involvement of the Working Parties

Documentation: Informal document GRSP-53-09

53. The expert from Japan, GRSP ambassador on IWVTA, introduced an updated list of discussion priorities of candidate UN Regulations to be included in the IWVTA (GRSP-53-09). GRSP provided comments such as the removals from the list of UN GTRs and of UN Regulation dealing with type approval of components (i.e. UN Regulation No. 25 (Head restraints)).

G. Highlights of March 2013 session of WP.29

54. The Secretary reported on the highlights of the 159th session of WP.29 (ECE/TRANS/WP.29/1102).

H. Regulation No. 11 (Door latches and hinges)

Documentation: Informal document GRSP-53-12

55. The expert from Germany introduced GRSP-53-12, aimed at introducing further provisions which allows the installation of full lock systems without compromising the safety and protection of road vehicle occupants. GRSP agreed to resume consideration on this agenda item at its December 2013 session and requested the secretariat to distribute GRSP-53-12 with an official symbol.

XXIII. Tributes (agenda item 22)

56. Learning that Mr. Shunsuke Takagi would no longer participate in future sessions of GRSP, the group acknowledged his valuable contributions to the work of GRSP and wished him all the best in his future activities.

XXIV. Provisional agenda for the next session (agenda item 23)

57. For its fifty-fourth session, scheduled to be held in Geneva from 17 (2.30 p.m.) to 20 (12.30 p.m.) December 2013, GRSP noted that the deadline for submission of official documents to the secretariat was 20 September 2013, twelve weeks prior to the session. Moreover, the following provisional agenda was adopted:

1. Adoption of the agenda.
2. Global technical regulation No. 7 (Head restraints).
3. Global technical regulation No. 9 (Pedestrian safety):
 - (a) Phase 2 of the global technical regulation;
 - (b) Proposal for Amendment 2.
4. Harmonization of side impact dummies.
5. Global technical regulation on electric vehicles.
6. Crash compatibility.
7. Regulation No. 11 (Door latches and hinges).
8. Regulation No. 14 (Safety-belt anchorages).
9. Regulation No. 16 (Safety-belts).
10. Regulation No. 17 (Strength of seats).
11. Regulation No. 22 (Protective helmets).
12. Regulation No. 29 (Cabs of commercial vehicles).
13. Regulation No. 44 (Child restraints systems).
14. Regulation No. 94 (Frontal collision).
15. Regulation No. 95 (Lateral collision):
 - (a) Proposal for a new Regulation on Pole Side Impact;
 - (b) Proposal for amendments.
16. Regulation No. 100 (Battery electric vehicle safety).
17. Buses and coaches.
18. Regulation No. 127 (Pedestrian safety):
 - (a) Proposal for Supplement 1 to Regulation No. 127;
 - (b) Proposal for the 01 series of amendments to Regulation No. 127.
19. New Regulation on Enhanced Child Restraint Systems.
20. Proposal for new Regulation on hydrogen and fuel cell vehicles.

21. Other business:
- (a) Exchange of information on national and international requirements on passive safety;
 - (b) 1997 Agreement (Inspections)–Development of Rule No. 2;
 - (c) Quiet Road Transport Vehicles (QRTV);
 - (d) Definition and acronyms in Regulations under GRSP responsibilities on the basis of an initiative of the Working Party on Pollution and Energy;
 - (e) Development of the International Whole Vehicle Type Approval (IWVTA) system and involvement of the Working Parties.
 - (f) Highlights of the June and November 2013 sessions of WP.29.

Annex I

[English only]

List of informal documents (GRSP-53-...) distributed without an official symbol during the session

<i>No.</i>	<i>Transmitted by</i>	<i>Agenda item</i>	<i>Language</i>	<i>Title</i>	<i>Follow-up</i>
01	Chair of GRSP	1	E	Running order of the provisional agenda	(a)
02	OICA	12	E	Contribution to the discussions to amend UN Regulation No. 29 (Cabs of Commercial Vehicles)	(c)
03	Russian Federation	12	E	UN Regulation No. 29 (Cabs of commercial vehicles)	(a)
04-Rev.1	Australia	4(a)	E	Final Report of the Informal Working Group on a Pole Side Impact UN GTR	(d)
05	Australia	4(a)	E	Proposal for amendments to ECE/TRANS/WP.29/GRSP/2013/7	(d)
06	Chair of the Informal Working Group on UN GTR No. 7 - Phase 2	2	E	Draft UN Global Technical Regulation No. 7 (Head restraints)	(a)
07	Japan	17	E	Guidelines for Improvement of Vehicle Safety Regarding Infant-Carrying Vehicle	(a)
08	Japan	17	E	Development of Guidelines for Improvement of Vehicle Safety Regarding Infant-Carrying Vehicles	(a)
09	Japan	22(f)	E	Priority of Discussion on Technical Requirements for IWVTA and Draft Report to IWVTA Informal Meeting	(a)
10	Germany	16	E	Progress report of the informal group REESS (Rechargeable Energy Storage Systems)	(a)

<i>No.</i>	<i>Transmitted by</i>	<i>Agenda item</i>	<i>Language</i>	<i>Title</i>	<i>Follow-up</i>
11	Germany	8	E	Proposal for amendment to UN Regulation No. 14 (Safety-belt anchorages)	(b)
12	Germany	21(h)	E	Proposal for amendment to Regulation No. 11 (Door latches and hinges)	(b)
13	United States of America	4(a)	E	Draft Pole Side Impact UN GTR - Proposal for amendments to ECE/TRANS/WP.29/GRSP/2013/7	(d)
14	Chair of the Informal Working Group on UN GTR No. 7 - Phase 2	2	E	Status report of the Informal Working Group on UN GTR7 Phase 2	(a)
15	The Netherlands	2	E	Increase of the absolute height of head restraints	(a)
16	The Netherlands	2	E	UN GTR7 measuring method for effective head restraint height	(a)
17	The Netherlands	2	E	Proposal on actual needed height of head restraints	(a)
18	FIA Foundation	21(a)	E	Progress of ASEAN New Car Assessment Programme	(a)
19	France	4(a)	E	Proposal for amendments to ECE/TRANS/WP.29/GRSP/2013/7 – Proposal for a global technical regulation on Pole Side Impact	(d)
20	Japan	14	E	Japan's Comment on Injury Criteria for Amendment of UN Regulation No. 94	(a)
21	France	19	E	Proposal of amendments to the new UN Regulation on Enhanced Child Restraint Systems	(a)
22	France	19	E	Proposal of amendments to the new UN Regulation on Enhanced Child Restraint Systems	(a)
23	Australia	4(a)	E	Proposal for a global technical regulation on Pole Side Impact - Amendments agreed by GRSP to ECE/TRANS/WP.29/GRSP/2013/7	(d)
24	CLEPA	19	E	CLEPA analysis - Future i-Size approval possibilities	(a)
25	Chair of the Informal Working Group on Frontal Impact	14	E	Status report of the Informal Working Group on Frontal Impact	(a)

<i>No.</i>	<i>Transmitted by</i>	<i>Agenda item</i>	<i>Language</i>	<i>Title</i>	<i>Follow-up</i>
26	Chair of the Informal Working Group on Frontal Impact	14	E	Proposal of amendments to Regulation No. 94	UN (a)
27	Chair of GRSP	14	E	Proposal of amendments to Regulation No. 94	UN (d)
28	Chair of the Informal Working Group on UN GTR No. 9 - Phase 2	3(a)	E	Progress report of the Informal Working Group	(a)
29	Chair of the Informal Working Group on UN GTR No. 9 - Phase 2	3(a)	E	UN GTR No. 9 – Draft proposal for Amendment 2	(a)

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 informal document.
- (d) Adopted and to be submitted to WP.29.

Annex II

Draft global technical regulation on pole side impact

Amendments adopted to ECE/TRANS/WP.29/GRSP/2013/7 (see para. 11 of this report)

In the text of Statement of technical rationale and justification (Part I),

Delete square brackets from all the text of Part I.

Paragraph 16, amend to read:

"16. Head injuries were **a** major cause..."

Paragraph 21, amend to read:

"21. Australia presented data at **various meetings of** the informal working group that indicated that as a proportion of Category 2 vehicle fatalities (up to 3.5t GVM), pole side impacts and other side impacts were approximately as common as they were among Category 1-1 vehicles (**PSI-01-07; PSI-04-06; PSI-06-07**). However, the large majority of fatalities and serious injuries in Category 2 vehicles (up to 3.5t GVM) in Australia involve passenger derived utility vehicles, 4X2 pick-ups/cab chassis utility vehicles and 4X4 pick-ups/cab chassis utility vehicles."

Insert a new paragraph 23, to read:

"**23. At the eighth meeting of the informal working group, France presented a comparative assessment of the benefits from a pole side impact test for Category 1-1 and Category 2 vehicles (up to 3.5t GVM) (PSI-08-10). The benefit-cost ratio for the Category 1-1 vehicles was significantly higher than for the Category 2 vehicles, indicating that application of the gtr to Category 2 vehicles in France would not be justified.**"

Paragraph 23 (former), renumber as 24 and amend to read:

"**24.** The Australian **and French data** highlights the fact that the composition of vehicle fleets, and therefore safety need, among Category 2 vehicles is **likely to be** highly variable from country to country. This matter will be considered further when the applicability of the gtr is considered in Section E below."

Paragraph 24 (former), renumber as 25.

Paragraph 25 (former), renumber as 26 and amend footnote ⁹ to read:

"⁹. Fitzharris et al, pp. 126-**128**."

Paragraphs 26 to 29, renumber as paragraphs 27 to 30.

Paragraph 30 (former), renumber as paragraph 31 and amend to read:

"**31.** It might also be noted that ESC is likely to be at its most effective in countering rollovers, particularly **among Category 2** vehicles. It will be for Contracting Parties to determine the extent the gtr will address fatalities and injuries in rollover crashes, in light of their own circumstances, when considering adoption of the gtr."

Paragraphs 31 to 33 (former), renumber as paragraphs 32 to 34.

Paragraph 34 (former), renumber as paragraph 35 and amend footnote ¹⁵ to read:

^{15.} Further details of the biofidelity evaluations conducted by the ISO WorldSID taskforce are available in ISO/DIS 15830_1:2012 and Enhanced Safety of Vehicles (ESV) conference paper 09-0505. The WorldSID 50th percentile adult male and ES-2re biofidelity comparison conducted by NHTSA is summarized in ESV conference paper 09-0563."

Paragraphs 35 to 36, renumber as paragraphs 36 to 37.

Paragraph 37, renumber as paragraph 38.

Paragraphs 38 to 70 (former), renumber as paragraphs 39 to 71.

Insert new paragraphs 72 and 73, to read:

"72. At the fifth meeting of the informal working group, the United States of America noted that while it would be in a position to agree with the injury risk curves within the timeline of the Phase 1 of this gtr, it may not be in a position to agree to injury risk values without delaying the timeline. The United States suggested that, given that benefits and costs may vary depending on the fleets of different countries, the gtr should include only the injury risk curves, with Contracting Parties to choose appropriate injury assessment reference values (IARVs) when implementing the gtr in national legislation. As stated in paragraph 32, the United States is in a unique position at having the only existing dynamic pole side impact regulation. Because of this, the United States of America seeks to ensure that the benefits achieved by their current pole side impact regulation are increased or, at least, maintained.

73. While the informal working group rejected the suggestion of including only the injury risk curves, it is understood that the United States will conduct a full analysis of the impacts of the IARVs and other aspects of the gtr in Phase 2. The United States will be conducting fleet testing with the WorldSID dummies to ensure benefits are maintained. It will also examine possible incremental improvements, such as the effect of lowering injury threshold values and adding more injury criteria to Phase 2. These efforts could result in future recommendations to adjust the injury risk values and other aspects of this gtr."

Paragraphs 71 to 74 (former), renumber as paragraphs 74 to 77.

Paragraph 75 (former), renumber as paragraph 78 and amend to read:

"78. The AIS 2005 definitions include very few AIS3 upper extremity injuries. In contrast to head and thorax injuries, which occur up to the AIS6 level, upper extremity injuries do not exceed the AIS2 level unless involving an open fracture; a crush or traumatic amputation at, or below the shoulder level; or injuries resulting in significant blood loss (>20 per cent by volume)."

Paragraphs 76 to 90 (former), renumber as paragraphs 79 to 93.

Paragraph 91 (former), renumber as paragraph 94 and amend to read:

"94. In terms of AIS3+ abdominal ... performance criterion threshold limit for the ES-2 in Regulation No. 95 and the ES-2re in FMVSS 214."

Paragraphs 92 and 93 (former), renumber as paragraphs 95 and 96.

Paragraph 94, renumber as paragraph 97 and amend to read:

"**97.** While ISO WG6 recommended ... deflection criterion, but in the meantime this acceleration based criterion is expected to detect ..."

Paragraphs 95 to 119 (former), renumber as paragraphs 98 to 122.

Paragraph 120 (former), renumber as paragraph 123 and amend to read:

"**123.** As part of its consultancy on the safety need, effectiveness and benefits and costs of the gtr, MUARC conducted an analysis of studies on the effectiveness of side airbags. The studies were published in the period 2003-2011. On the basis of its analysis, MUARC decided to "use a (baseline) 32 per cent reduction in fatalities due to the presence of a curtain plus thorax side airbag system (and to) adopt a value of 34 per cent as our basis of reduction in injuries"¹. This baseline reduction in fatalities and injuries is in comparison to a situation in which there is no side airbag protection."

Paragraphs 121 to 123 (former), renumber as paragraphs 124 to 126.

Paragraph 124 (former), renumber as paragraph 127 and amend to read:

"**127.** These changes ... notwithstanding **that** the latter vehicle had received a 5 star ANCAP safety rating (PSI-07-03)."

Paragraphs 125 to 127 (former), renumber as paragraphs 128 to 130.

Paragraph 128 (former), renumber as paragraph 131 and amend to read:

"**131.** These figures are consistent with analysis undertaken by NHTSA which estimated that a total 47 per cent reduction in fatalities was achievable."¹

Paragraphs 129 to 134 (former), renumber as paragraphs 132 to 137.

Insert new paragraphs 138, to read:

"**138.** The informal working group also considered using a study undertaken by the European Enhanced Vehicle-safety Committee (EEVC) that investigated the societal benefit to be gained from introducing of a pole side impact test into the regulation. The report was finalised in 2010 and the results were presented during the first meeting of the informal working group (PSI-01-17). The estimated costs for upgrading cars of different categories to fulfil pole side impact requirements ranged from 98 Euro to 506 Euro depending of the car category and the level of safety that was already provided by the car. Contracting Parties represented in the informal working group agreed that the estimated costs for upgrading a vehicle to meet the pole side impact requirements were too high and, therefore, did not consider this approach further for cost analysis for the gtr."

Paragraphs 135 to 139 (former), renumber as paragraphs 139 to 143.

Paragraph 140 (former), renumber as paragraph 144 and amend to read:

"**144.** ... This means side restraint system component costs obtained by inflating 1999 US dollar costs to 2012 US dollar costs could be expected to represent **maximum** component cost estimates."

Paragraphs 141 to 142 (former), renumber as paragraphs 145 to 146.

Paragraph 143, renumber as paragraph 147 and amend footnote ²², to read:

"^{22.} Fitzharris et al, p 136-139"

Paragraphs 144 to 149 (former), renumber as paragraphs 148 to 153

Text of the Regulation (Part II),

Insert a new paragraph 3.1., to read:

"3.1. **"Back Door" is a door or door system on the back end of a motor vehicle through which passengers can enter or depart from the vehicle or from which cargo can be loaded or unloaded. It does not include:**

- (a) **A trunk lid; or**
- (b) **a door or window that is composed entirely of glazing material and whose latches and/or hinge systems are attached directly to the glazing material."**

Paragraphs 3.1. to 3.7. (former), renumber as paragraphs 3.2. to 3.8.

Paragraph 3.8. (former), shall be deleted.

Paragraph 4.1., footnote ³, amend to read:

"^{3.} **Technical specifications, including detailed drawings and procedures for assembly/disassembly of the WorldSID 50th percentile adult male dummy are specified in Addendum [2] of the Mutual Resolution. Until Addendum [2] of the Mutual Resolution is adopted, drawings and procedures are available from ISO, Geneva, Switzerland."**

Paragraph 4.4.2., amend to read:

"4.4.2. Any door (including **a back** door, but excluding a trunk lid), ..."

Annex 1

Paragraph 3.3.1., insert the reference to footnote ¹ and footnote ¹ and amend to read:

"3.3.1. A WorldSID 50th percentile adult male dummy in accordance with Addendum [2] of the Mutual Resolution and ... of this regulation."¹

Paragraph 5.5.1., amend to read:

"5.5.1. Doors, including **any back** door ..."

Paragraph 7.2., insert the reference to footnote ⁴ and footnote ⁴ and amend to read:

"7.2. The maximum test speed may be reduced to 26 km/h for vehicles with a width of 1.50 m or less."⁴

Paragraphs 7.5. and 7.6., remove square brackets from the text.

Annex 2

Paragraph 2.3., shall be deleted.

Paragraph 2.4. (former), renumber as paragraph 2.3. and amend to read:

"2.3. "Design rib angle" means ... male **middle thorax**, lower thorax and abdominal ribs relative ..."

¹ **Addendum [2] of the Mutual Resolution is under development. Until Addendum [2] of the Mutual Resolution is adopted, ISO 15830 certification, assembly and disassembly procedures for the WorldSID 50th percentile adult male dummy may be obtained from ISO, Geneva, Switzerland. Engineering drawings are available from ISO at standards.iso.org/iso/15830. For progress on the development of Addendum [2] to the Mutual Resolution refer to the UNECE Working Party on Passive Safety (GRSP) website, Palais des Nations, Geneva, Switzerland."**

⁴ **Contracting Parties selecting this option shall notify the Secretary-General in writing when submitting the notification required by Article 7.2. of the 1998 Agreement."**

Paragraphs 2.5., renumber as 2.4.

Paragraph 2.6.(former), renumber as paragraph 2.5. and amend footnote ¹ to read:

"^{1.} Details of the H-point locator assembly (H-point tool) including drawings **and dimensions are available in Addendum [2] of the Mutual Resolution. Until Addendum [2] of the Mutual Resolution is adopted, these details are available from ISO at standards.iso.org/iso/15830.**"

Paragraph 2.7.(former), renumber as paragraph 2.6. and amend to read:

"2.6. "Dummy rib angle" means the angle of the test dummy **middle thorax, lower thorax and ...**"

Paragraphs 2.8. to 2.12., renumber as paragraphs 2.7. to 2.11.

Paragraph 2.13., renumber as paragraph 2.12. and amend to read:

"2.12. "Seat cushion reference line" means ... in paragraph **2.14.** of this Annex."

Paragraphs 2.14. and 2.15., renumber as paragraphs 2.13. and 2.14.

Insert a new paragraph 2.15., to read:

"2.15. "**Shoulder median plane**" means a plane dividing the left or right (as applicable) shoulder clevis into symmetrical anterior/posterior sections. The shoulder median plane is perpendicular to the centreline of the shoulder pivot shaft and parallel to the shoulder load cell y-axis (or an equivalently oriented axis of a shoulder load cell structural replacement)."

Paragraph 4.1., amend to read:

"4.1. Where applicable, the adjustment specified in paragraph 4.1.1. **of this Annex;** and in ... and 4.1.3. **of this Annex;** shall be performed on the vehicle."

Paragraph 5.6., remove square bracket from the text.

Paragraph 5.7., amend to read:

"5.7. Use the seat control that primarily moves the seat fore/aft to adjust the SCRP to the rearmost **location.**"

Paragraph 5.9., amend to read:

"5.9. Use the seat control that primarily moves the seat vertically to adjust the SCRP to the lowest vertical location. Verify that the seat cushion is still at the rearmost seat track location. **Record the longitudinal (X-axis) position of the SCRP in the vehicle reference coordinate system.**"

Paragraph 5.11., amend to read:

"5.11. Determine the ... paragraphs **5.9.** and 5.10 above (i.e. 20 mm rearward of the mid-track position)."

Paragraph 5.13., amend to read:

"5.13. Record the longitudinal (X-axis) ... paragraph **7.4.6.** of this Annex; this adjustment position shall be used as the final seat cushion adjustment position for the installation of the dummy³."

Paragraphs 6.6.2.2. and 6.6.2.1., remove the square brackets from the text.

Paragraph 6.20., remove square brackets from the text.

Paragraph 6.25., amend to read:

"6.25. Except as provided in paragraph **7.4.6.** of this Annex;"

Paragraph 7.15., renumber as paragraph 7.14.

Paragraph 7.16.(former), renumber as paragraph 7.15 and amend to read:

"7.4.15. Place both arms at the **48°** detent position. In this **position, each** half arm bone **plane of symmetry** forms an angle of **48° ± 1°** with the **adjacent (i.e. left/right as applicable) shoulder median plane.**"

Paragraph 7.4.2., insert the reference to a new footnote ⁵ and a new footnote ⁵ to read:

"7.4.2. Apply a for/aft and lateral rocking motion to settle the pelvis rearward in the seat.⁵"

Paragraph 7.4.3., shall be deleted.

Paragraph 7.4.4., renumber as 7.4.3. and amend to read:

"7.4.3. Where **the abdominal rib coupler and/or the outer band of each (i.e. left/right) lower abdominal rib assembly contacts** the pelvis flesh, **ensure the contacting surfaces of the abdominal rib coupler and the outer band of each lower abdominal rib are positioned in-behind the inner abdominal wall of the pelvis flesh, not on top of the pelvis flesh.**"

Paragraph 7.4.4., renumber as paragraph 7.4.5.

"7.4.5. Verify that the ... to 7.4.3. **of this Annex.** If it is still not possible to verify the dummy H-point is reasonably close (± 10 mm) to the WS50M H-point, record the offset and proceed to the next step."

Paragraphs 7.4.7. to 7.4.9.1., renumber as paragraphs 7.4.6. to 7.4.8.1.

Paragraphs 7.4.9.2. and 7.4.9.3., renumber as paragraphs 7.4.8.2. and 7.4.8.3. and remove square brackets from the text.

Paragraphs 7.4.10. and 7.4.11., renumber as paragraphs 7.4.9. and 7.4.10.

Paragraphs 7.4.11.1., renumber as 7.4.10.1. and amend to read:

"7.4.10.1. Adjust the dummy until the thorax tilt sensor angle reading (about the sensor y-axis) is within $\pm 1^\circ$ **of the design rib angle specified** by the manufacturer."

Paragraphs 7.4.11.2. to 7.4.12., renumber as 7.4.10.2. to 7.4.11.

Paragraphs 7.4.13. to 7.4.16., renumber as 7.4.12. to 7.4.15. and amend to read:

"7.4.12. Proceed to the final foot and leg positioning by repeating the steps outlined in paragraph **7.4.7. of this Annex** for a driver seating position or the steps outlined in paragraph **7.4.8. of this Annex** for a passenger seating position.

{7.4.13. Verify that the test dummy H-point and dummy rib angle are still in accordance with paragraphs **7.4.9.** and **7.4.10. of this Annex** respectively. If not, repeat the steps outlined from paragraph **7.4.9. of this Annex** onwards.}"

{7.4.14. Measure and ... rib angle and head core tilt sensor angles}"

⁵ **To ensure that a repeatable and stable pelvis position will be achieved, it is recommended to follow the completion of this step, with verifying the pelvis is in contact with the seat cushion over the whole pelvis length."**

- 7.4.15. Place both arms at the **48°** detent position. In this **position, each half arm bone plane of symmetry forms** an angle of $48^\circ \pm 1^\circ$ with **the adjacent (i.e. left/right as applicable) shoulder median plane.**"

Annex 7

Paragraph 4.1., amend to read:

- "4.1. The maximum thorax rib deflection is the maximum deflection of any (upper, middle or lower) thorax rib, **as determined from the voltage output ...**"

Paragraph 5.1., amend to read:

- "5.1. The maximum abdominal rib deflection is the maximum deflection of any (upper or lower) abdominal rib, **as determined from the voltage output ...**"

Adopted on the basis of GRSP-53- 04-Rev.1 (see para. 11)

Final Report of the informal working group on a Pole Side Impact global technical regulation

A. Introduction

1. The intention of this report is to supplement procedural information on the development of the gtr included in the Part I (Statement of technical rationale and justification) of the gtr and to provide further details on the informal working group.
2. For information on the technical rationale and justification of the gtr, readers are referred to Part I the gtr.

B. Procedural Background

3. At the 150th session of the World Forum for Harmonization of Vehicle Regulations (WP.29) in March 2010, the representative from Australia introduced an informal document (WP.29-150-11), proposing the development of a global technical regulation (gtr) on pole side impact (PSI). There were five key elements to this proposal, namely that:
 - (a) A high number of fatalities occurred in pole side impacts (that is, impacts with narrow objects such as telegraph poles, signposts and trees) and other side impacts in Australia and other countries;
 - (b) There was wide variation between side and pole side crash tests both in regulations and voluntary standards;
 - (c) There was wide variation between the crash dummies being used in the crash tests and concerns over their biofidelity, raising concerns about their effectiveness in predicting real world injury outcomes;
 - (d) The development of the WorldSID 50th percentile adult male dummy, with its superior biofidelity, provided a unique opportunity to improve the international crash test regime for side impacts through development of a gtr on pole side impact, thereby improving the safety of vehicle users and minimising costs to consumers and industry; and
 - (e) a pole side impact standard was likely to produce benefits for side impacts generally by driving improvements in head protection.

4. The Executive Committee of the 1998 Agreement (AC.3) requested the secretariat of WP.29 to distribute WP.29-150-11 with an official symbol for consideration and vote at its June 2010 session. It was agreed to transmit WP.29-150-11 to the Working Party on Passive Safety (GRSP) to consider at its May 2010 session and to assess the need for establishing an informal working group.
5. At its forty-seventh session in May 2010, GRSP considered an official proposal made by the expert from Australia (ECE/TRANS/WP.29/2010/81) together with a further Informal document (GRSP-47-28), which included a proposed task list (subsequently developed into terms of reference), and endorsed the establishment of an informal working group under the chairmanship of Australia, subject to the consent of AC.3.
6. At the 151st session of WP.29 in June 2010, AC.3 considered an official proposal tabled by the representative from Australia and agreed to develop the gtr and to establish the informal working group. AC.3 also agreed that the initial tasks of the informal working group should be to:
 - (a) confirm the safety need for a gtr in light of the increasing prevalence of electronic stability control in the vehicle fleet; and
 - (b) simultaneously assess potential candidate crash test standards to be addressed by the proposed gtr. The proposal was included in the list of proposals for developing gtrs, adopted by AC.3 (ECE/TRANS/WP29/AC.3/28).
7. At the 154th session of WP.29 in June 2011, AC.3 adopted the terms of reference of the informal working group and its first progress report (ECE/TRANS/WP.29/2011/87).
8. At the 157th session of WP.29 in June 2012, AC.3 adopted the second progress report of the informal working group, together with a change to the terms of reference of the informal working group to clearly provide for a second phase of the development of the gtr to incorporate the WorldSID 5th percentile adult female (ECE/TRANS/WP.29/2012/59). The amended terms of reference are provided at Annex 1.
9. At the fifty-first session of GRSP in May 2012, the informal working group submitted an initial draft of part II of the gtr (GRSP-51-16).
10. At the 158th session of WP.29 in November 2012, AC.3 agreed to fix the mandate for the first phase of the informal working group until March 2014, on the basis that an official draft of the gtr would be considered by AC.3 in November 2012, but that delays were possible. It was also noted that as the timetable to validate the WorldSID 5th percentile adult female was unclear, a proposal for the deadline of the second phase would be brought forward separately.
11. At the fifty-second session of GRSP in December 2012, the informal working group submitted an initial draft of Part I and a further developed draft of Part II of the gtr (GRSP-52-07).
12. At the fifty third session of GRSP in May 2013, the informal working group submitted the Proposal for a global technical regulation on Pole Side Impact (ECE/TRANS/WP.29/GRSP/2013/7) and the Proposal for amendments to ECE/TRANS/WP.29/GRSP/2013/7 (GRSP-53-05).
13. GRSP substantially agreed the proposed amendments to ECE/TRANS/WP.29/GRSP/2013/7 contained in GRSP-53-05 and made a number of other amendments to the text. These changes are shown in revision marking mode in GRSP-53-23. GRSP adopted ECE/TRANS/WP.29/GRSP/2013/7 as amended by GRSP-52-23, so it could be provided as a working document for consideration by AC.3 in November 2013.

14. Details of the Informal Working Group:

The informal working group conducted the following meetings:

- (a) 1st meeting, Bonn, 16-18 November 2010
- (b) 2nd meeting, Brussels, 3-4 March 2011
- (c) 3rd meeting, Washington, 9 June 2011
- (d) 4th meeting, Seoul, 27-28 October 2011
- (e) 5th meeting, London, 22-23 March 2012
- (f) 6th meeting, Munich, 20-21 June 2012
- (g) 7th meeting, Washington, 20-21 September 2012
- (h) 8th meeting, Paris, 20-21 November 2012

15. The informal working group also held a drafting session by webex on 7 February 2013.

16. Meetings were attended by representatives of: Australia, Canada, China, the European Commission, France, Germany, Japan, the Netherlands, the Republic of Korea, the United Kingdom, the United States of America, and the International Organisation of Motor Vehicle Manufacturers (OICA).

17. A number of other organisations, particularly research bodies, attended various meetings and documents were circulated to an extensive mailing list.

18. The meetings were chaired by Mr Robert Hogan and the Secretariat and technical support was provided by Mr Thomas Belcher and Mr Mark Terrell, from the Australian Department of Infrastructure and Transport.

19. The gtr informal working group has worked in close conjunction with the informal working group on harmonization of side impact dummies (WorldSID group) and generally meetings of the WorldSID group have been held immediately before meetings of the gtr group, enabling participants to attend both meetings.

20. A large number of documents have been referred to or developed by the informal working group, including minutes and presentations, which - taken together with the documents submitted to GRSP - provide a chronology of development of the gtr. These documents are listed in Annex 2 and are available on the UNECE website at: <https://www2.unece.org/wiki/pages/viewpage.action?pageId=3178630>

Annex 1

Revised Terms of Reference.

The major tasks that will be performed by an Informal Working Group include:

- (a) Review of existing research, including crash tests, and literature;
- (b) Liaison with, and consideration of the results of, the GRSP WorldSID Informal Working Group;
- (c) Assessment of safety need, including analysis of current fatalities and injuries from pole side impact, other side impacts and rollovers, taking account of positive safety developments already occurring or likely such as ESC; and target vehicle categories to be taken into consideration;
- (d) Examination of possible test procedures;

- (e) Consideration of variations to candidate test procedures;
- (f) Establishment of likely countermeasures driven by shortlisted test procedures;
- (g) Calculation of likely injury mitigation coverage of the crash and injury population from these countermeasures;
- (h) Assessment of benefits and costs for shortlisted test procedures (including data from a significant range of countries, as there may be wide variations in benefits);
- (i) Assessment of likely incremental benefits and costs from, e.g., testing for smaller (5th percentile female) and non-struck side and rear seat occupants;
- (j) Selection of a preferred test procedure; and
- (k) Production of a draft global technical regulation phase 1 (WorldSID 50th percentile male) for consideration by GRSP and subsequently WP.29. ; and
- (l) Production of a draft global technical regulation phase 2 (WorldSID 5th percentile female) for consideration by GRSP and subsequently WP.29.

Annex 2

Papers from Meetings of the Informal Working Group:

RD-01 National Highway Traffic Safety Administration (NHTSA): 49 CFR Parts 571 and 585 Federal Motor Vehicle Safety Standards; Occupant Protection in Interior Impact; Side Impact Protection; Fuel System Integrity; Electric-Powered Vehicles: Electrolyte Spillage and Electrical Shock Protection; Side Impact Phase-In Reporting Requirements; Final Rule (2007)

RD-02 NHTSA (Office of Regulatory Analysis and Evaluation, National Centre for Statistics and Analysis): FMVSS No. 214 Amending Side Impact Dynamic Test: Adding Oblique Pole Test (2007)

RD-03 NHTSA & Abacus Technology Corporation: NHTSA Side Impact Research: Motivation for Upgraded Test Procedures

RD-04 NHTSA: 49 CFR Parts 571 and 598 Federal Motor Vehicle Safety Standards; Side Impact Protection; Side Impact Phase-In Reporting Requirements; Proposed Rule (2004)

RD-05 NHTSA: 49 CFR Parts 571 and 585 [Docket No. NHTSA–2008–0104] RIN 2127–AK27 Federal Motor Vehicle Safety Standards; Occupant Protection in Interior Impact; Side Impact Protection; Side Impact Phase-In Reporting Requirements (2008)

PSI-01-01 Draft Agenda for the First Meeting of the GRSP Informal Group on a Pole Side Impact gtr

PSI-01-02 Request for Country Data

PSI-01-03 Pole Definition

PSI-01-04 Summary of Existing Crash Test and Simulation Data

PSI-01-05 GRSP Informal Group on a Pole Side Impact gtr (WP.29 and GRSP Decisions, Draft Procedures and Terms of Reference)

PSI-01-06 Agenda for the first meeting of the GRSP Informal Group on a Pole Side Impact gtr

- PSI-01-07 Australian Department of Infrastructure and Transport: Pole Side Impact gtr: Assessment of Safety Need: Initial Data Collection
- PSI-01-08 German Federal Highway Research Institute (BASt): Influence of Vehicle Stability Control on Accidents on Rural Roads – GRSP Informal Group on a Pole Side Impact gtr
- PSI-01-09 Australian Department of Infrastructure and Transport & Monash University Accident Research Centre (MUARC): Evaluating Vehicle Technologies – Electronic Stability Control Using Australian Used Car Safety Ratings Data
- PSI-01-10 NHTSA: US Side Impact Pole Test – Federal Motor Vehicle Safety Standard No. 214
- PSI-01-11 European Enhanced Vehicle-safety Committee (EEVC) Working Group 13 & Working Group 21: Accident Data: Side Impacts with Poles
- PSI-01-12 Australian Department of Infrastructure and Transport: Summary of available test data
- PSI-01-13 Australian Department of Infrastructure and Transport: Summary of current pole tests
- PSI-01-14 Transport Canada: Pole Test Comparison of the WorldSID InfraRed - Telescoping Rod for Assessment of Chest Compression (IRTRACC), WorldSID Rib-Eye & euro side impact dummy (ES) 2 - rib extension (re)
- PSI-01-15 Australian Department of Infrastructure and Transport: Australian Pole Side Impact Research 2010 – A summary of recent oblique, perpendicular and offset perpendicular pole side impact research with WorldSID 50th
- PSI-01-16 NHTSA: Calculating Benefits for Oblique Pole Side Impact Rulemaking
- PSI-01-17 EEVC Working Group 13 & Working Group 21: Cost/Benefit of Side Impact Test Procedures
- PSI-01-18 Transport Canada: WorldSID Positioning – Sub-Committee Update
- PSI-02-01 Draft Agenda for the 2nd Meeting of the GRSP Informal Group on a Pole Side Impact GTR
- PSI-02-02 First Progress Report of the Informal Group on a Pole Side Impact (PSI) GTR
- PSI-02-03 Minutes of the First Meeting of the GRSP Informal Group on a Pole Side Impact GTR
- PSI-02-04 Agenda for the 2nd meeting of the GRSP Informal Group on a Pole Side Impact GTR
- PSI-02-05 NHTSA: FMVSS No. 226 – Ejection Mitigation Final Rule
- PSI-02-06 Australian Department of Infrastructure and Transport: Pole Side Impact GTR: Assessment of Safety Need: Updated Data Collection
- PSI-02-07 Renault & PSA Peugeot Citroen: Pole Side Impact Accident Data – France National & LAB Data
- PSI-02-08 Australian Department of Infrastructure and Transport: Application/Scope of PSI gtr (draft for discussion)
- PSI-02-09 Integrated Project on Advanced PROtection SYStems (APROSYS): Car to Pole Side Impact Activities

- PSI-02-10 NHTSA: WorldSID Crash Testing
- PSI-02-11 NHTSA: Discussion of Injuries in Pole Side Impact Crashes – NHTSA’s Motivation for Upgrading the Side Impact Test Procedures & Benefit Analysis
- PSI-02-12 BAST: Accident Data: Side Impacts with Poles – Informal Group on a Pole Side Impact gtr (PSI)
- PSI-02-13 Australian Department of Infrastructure and Transport: Analysis of Vehicle Structural Deformation in Oblique, Perpendicular, and Offset Perpendicular Pole Side Impact
- PSI-02-14 NHTSA: Real World Need for Oblique Test
- PSI-02-15 ISO/WG6 & ACEA-TFD: Update on the WorldSID Injury Risk Curves
- PSI-02-16 Australian Department of Infrastructure and Transport: Fatalities and Serious Injuries in Side Impact Crashes by Age – Victoria, Australia, 2000-2009
- PSI-02-17 University of Michigan Transportation Research Institute: Effects of Occupant Age on AIS 3+ Injury Outcome Determined from Analyses of Fused National Automotive Sampling System (NASS)/Crash Injury Research (CIREN) Data
- PSI-02-18 BMW Group: Side Pole Impact Accidents and Vehicle Testing
- PSI-02-19 Australian Department of Infrastructure and Transport: Research Proposal – Quantitative analysis of Side Impact injuries, and effectiveness of existing countermeasures; Extension of existing work on side airbag effectiveness
- PSI-03-01 Agenda for the 3rd Meeting of the GRSP Informal Group on a Pole Side Impact gtr
- PSI-03-02 Minutes of the Second Meeting of the GRSP Informal Group on a Pole Side Impact GTR
- PSI-03-03 Australian Department of Infrastructure and Transport & Transport Canada: Joint Australian and Canadian Pole Side Impact Research
- PSI-03-04 Australian Department of Infrastructure and Transport: Pole Side Impact GTR: Assessment of Safety Need: Updated Data Collection
- PSI-03-05 Australian Department of Infrastructure and Transport: Fatalities and Serious Injuries in Side Impact Crashes by Impact Type, Occupant Age and Year of Vehicle Manufacture, Victoria, Australia, 1999-2010
- PSI-03-06 NHTSA: Incremental Benefits Perpendicular to Oblique Configuration
- PSI-03-07 MUARC: Data Analysis to Investigate the Injury Profile of Near-Side, Side Impact Crashes: a Comparison of Injury Risk between Pole and Vehicle-Vehicle Impacts
- PSI-03-08 Australian Department of Infrastructure and Transport: Scope of the gtr (draft for discussion)
- PSI-03-09 Australian Department of Infrastructure and Transport: Options for the 5th Female
- PSI-03-10 BAST: Accident Data: Side Impacts with Poles
- PSI-03-11 BMW Group: WorldSID 50M – Injury Criteria
- PSI-03-12 NHTSA: Repeatability of Oblique Test Configuration
- PSI-04-01 Agenda for the 4th Meeting of the GRSP Informal Group on a Pole Side Impact gtr

- PSI-04-02 Minutes of the Third Meeting of the GRSP Informal Group on a Pole Side Impact gtr
- PSI-04-03 Australian Department of Infrastructure and Transport: Joint Australian and Canadian Pole Side Impact Research
- PSI-04-04 French Technical Union for the Automobile, Motorcycle and Cycle Industries (UTAC): 4th Meeting of the GRSP Informal Group on Pole Side Impact gtr
- PSI-04-05 Australian Department of Infrastructure and Transport: Safety Need – High Level Figures
- PSI-04-06 Australian Department of Infrastructure and Transport: gtr Scope – N₁ Occupant Fatalities in Australia
- PSI-04-07 Australian Department of Infrastructure and Transport: Options for Addressing Gap in Readiness between WorldSID Male 50th and WorldSID Female 5th in Drafting the Pole Side Impact gtr
- PSI-04-08 Australian Department of Infrastructure and Transport: Analysis of Australian National Crash In-Depth Study (ANCIS) Pole Side Impact Cases by Angle of Impact
- PSI-04-09 NHTSA: Exclusions (in FMVSS 214)
- PSI-04-10 OICA: Scope of GTR – Pole Side Impact – Commercial Vehicle Use and Data
- PSI-04-11 Japan Automobile Standards Internationalization Center (JASIC)/Japan: Japanese Proposal and Research Plan
- PSI-04-12 Australian Department of Infrastructure and Transport: Draft Outline of Preamble of the gtr
- PSI-04-13 Australian Department of Infrastructure and Transport: Draft Text of the Regulation of the gtr (NB a revised draft of this text was circulated to PSI Informal Group members on 4 November 2011 as a working document)
- PSI-05-01 Agenda for the 5th Meeting of the GRSP Informal Group on a Pole Side Impact GTR
- PSI-05-02 Minutes of the Fourth Meeting of the GRSP Informal Group on a Pole Side Impact GTR
- PSI-05-03 MUARC: Analysis of In-depth and Mass Crash Data to Inform the Development of the Pole Side Impact Global Technical Regulation
- PSI-05-04 BAST: Pole Side Impact Accidents in Germany
- PSI-05-05 Australian Department of Infrastructure and Transport & Transport Canada: Joint Australian and Canadian Pole Side Impact Research
- PSI-05-06 JASIC/Japan: Research TEST Result & Japanese Proposal
- PSI-05-07 OICA: Pole Side Impact Protection – Cost Data – Based on Studies from EEVC and NHTSA
- PSI-05-08 Australian Department of Infrastructure and Transport: Safety Need – High Level Figures
- PSI-05-09 OICA: Scope of gtr – Pole Side Impact – Exemption of Commercial Vehicles
- PSI-05-10 Australian Department of Infrastructure and Transport: The Importance of Pole Side Impact Alignment Accuracy

- PSI-06-01 Agenda for the 6th Meeting of the GRSP Informal Group on a Pole Side Impact GTR
- PSI-06-02 Minutes of the Fifth Meeting of the GRSP Informal Group on a Pole Side Impact GTR
- PSI-06-03 MUARC: Further Injury Risk Analysis and the Cost-effectiveness of Enhanced Side Impact Protection in the Form of a GTR for PSI Crashes
- PSI-06-04 Australian Department of Infrastructure and Transport & Transport Canada: Joint Australian and Canadian Pole Side Impact Research
- PSI-06-05 UTAC: Pole Side Impact Test on European Berline
- PSI-06-06 Australian Department of Infrastructure and Transport: Safety Need – High Level Figures
- PSI-06-07 Australian Department of Infrastructure and Transport: Category 2 Vehicles: Australian Sales and Safety Need Data
- PSI-06-08 ISO WorldSID 50th Task Group: Update to GTR Pole Side Impact
- PSI-06-09 NHTSA: WorldSID 50th TEG: Status Report
- PSI-06-10 Medical College of Wisconsin: Preliminary Analysis of Shoulder Traumas from the CIREN Database
- PSI-06-11 Audi: Occupant Loading in Pole Side Impact
- PSI-06-12 NHTSA: Pole Side Impact Vehicle Tests: WorldSID Dummy Data
- PSI-06-13 Australian Department of Infrastructure and Transport & Transport Canada: Summary of Rib Deflection Responses
- PSI-07-01 Agenda for the 7th Meeting of the GRSP Informal Group on a Pole Side Impact GTR
- PSI-07-02 Minutes of the Sixth Meeting of the GRSP Informal Group on a Pole Side Impact GTR
- PSI-07-03 Australian Department of Infrastructure and Transport & Transport Canada: Joint Australian and Canadian Pole Side Impact Research
- PSI-07-04 Korea Automobile Testing & Research Institute: Evaluation of WorldSID and ES2 Dummy in Pole Side Impact
- PSI-07-05 Medical College of Wisconsin: Deflection Responses from Post Mortem Human Subject (PMHS) in Oblique Side Impact Sled Tests
- PSI-07-06 Medical College of Wisconsin & NHTSA Vehicle Research Test Centre: WorldSID Abdomen Tests
- PSI-07-07 OICA: Proposal for PSI gtr Scope
- PSI-07-08 OICA: Van and Passenger Car Dimensions
- PSI-07-09 OICA: Preamble Text for Pole Side Impact Global Technical Regulation
- PSI-07-10 Japanese Proposal for Narrow Vehicles (Kei Cars, Etc.) (Impact Velocity)
- PSI-07-11 Beyond Safe – Bringing Physics into Models: Effect of Seating Height in Side Impact
- PSI-07-12 RDW: Shoulder Loading of WorldSID 50th

- PSI-07-13 BMW Group: WorldSID 50th percentile Shoulder Assessment – Industry Proposal
- 8th Meeting
- PSI-08-01 Agenda for the 8th Meeting of the GRSP Informal Group on a Pole Side Impact GTR
- PSI-08-02 Minutes of the Seventh Meeting of the GRSP Informal Group on a Pole Side Impact GTR
- PSI-08-03 GTR on Pole Side Impact: Timetable
- PSI-08-04 MUARC: Assessment of the Need for, and the Likely Benefits of, Enhanced Side Impact Protection in the Form of a Pole Side Impact Global Technical Regulation
- PSI-08-05 OICA: Preamble to GTR Pole Side Impact Scope Discussions
- PSI-08-06 OICA: German In-Depth Accident Study (GIDAS) Accident Analysis Pole Side Impact with CVs
- PSI-08-07 OICA: Proposed Scope
- PSI-08-08 WorldSID 50th Injury Risk Curves
- PSI-08-09 Rationale Behind the Shoulder Assessment Criteria for WorldSID
- PSI-08-10 LAB: Pole Side Impact Cost/Benefit Study, French Data
- PSI-08-11 Draft Text of the PSI Regulation
- PSI-08-12 Draft Preamble – Global Technical Regulation No. XX Pole Side Impact
- PSI-08-13 Lenard, J., Frampton, R., Kirk, A., Morris, A., Newton, R., Thomas, P., Fay, P.: Accidents, Injuries and Safety Priorities for Light Goods Vehicles in Great Britain.

Annex III

Draft amendments to Regulation No. 14

Amendments adopted to ECE/TRANS/WP.29/GRSP/2013/3 (see para. 20 of this report)

...

Insert a new paragraph 5.3.8.8., to read:

"5.3.8.8. Notwithstanding paragraph 5.3.8.1., ISOFIX positions are not required in ambulances or hearses as well as vehicles intended for use by the armed services, civil defence, fire services and forces responsible for maintaining public order."

Annex 1, insert a new item 7, to read:

"7. Utilises ISOFIX exemption permitted by paragraph 5.3.8.8.: yes/no/2"

Renumber items 7 to 19(former), as 8 to 20.

Annex IV

Draft amendments to Regulation No. 16

Amendments adopted to ECE/TRANS/WP.29/GRSP/2013/8 (see para. 23 of this report)

...

Paragraph 8.1.9., amend to read:

"8.1.9. In the case of ... visible damage remaining to the visor or the roof in the interior of the vehicle.

If the vehicle does not have a sun visor or roof, the warning label shall be positioned in a location where it is clearly visible at all times.

In the case of a frontal protection airbag for other seats in the vehicle, the..."

...

Annex V

Draft amendments to Regulation No. 17

Amendments adopted to ECE/TRANS/WP.29/GRSP/2013/5 (see para. 26 of this report)

Paragraphs 2.9., amend to read:

"2.9. "*Folding seat*" means a seat, **which is** normally folded, can be easily operated and **is designed** for occasional use by an occupant."

...

Annex VI

Draft amendments to Regulation No. 94

Adopted on the basis of GRSP-53-27 (see para. 35)

Paragraph 6.2.2., amend to read:

"6.2.2. In the case of ... visible damage remaining to the visor or the roof in the interior of the vehicle.

If the vehicle does not have a sun visor or roof, the warning label shall be positioned in a location where it is clearly visible at all times.

In the case of a frontal protection airbag for other seats in the vehicle, the ..."

Annex VII

Draft amendments to the new Regulation on Enhanced Child Restraint Systems

Amendments adopted to ECE/TRANS/WP.29/GRSP/2013/12 (see para. 44 of this report)

...

Paragraph 7.1.2.1., amend to read:

"7.1.2.1. The **manikin** shall be equipped with **either of** the load application **devices** as **appropriate, and** described in Annex 21. **Place the manikin** in the restraints installed in accordance with this Regulation and taking into account the manufacturer's instructions and with the standard slack as specified in paragraph 7.1.3.5., applied for all systems identically."

...

Annex 21, amend to read (the titles and the tables):

"Annex 21

Load application device I

...

No.	Part Number	Name	Information	Quantity
1	PV000009.1	head belt - 39mm	-	1
2	PV000009.2	shoulder belt lh/rh - 39mm	-	2
3	PV000009.3	crotch belt - 39mm	-	1
4	PV000009.4	hip belt - 39mm	-	1
5	102 18 31	stitch pattern (30x17)	stich: 77, thread: 30, colour: SABA grey	8
6	PV000009.5	plastic buckle	-	2
7	PV000009.6	stitch pattern (2x37)	stich: 77, thread: 30, colour: SABA grey	2

strech lenght	(+/-5mm)					
	Dummy Q 0	Q 1	Q 1,5	Q 3	Q 6	Q 10
head belt	1000mm	1000mm	1000mm	1200mm	1200mm	1200mm
shoulder belt	750mm	850mm	950mm	1000mm	1100mm	1300mm
crotch belt	300mm	350mm	400mm	400mm	450mm	570mm
hip belt	400mm	500mm	550mm	600mm	700mm	800mm
dimension X	120mm	130mm	140mm	140mm	150mm	1600mm

Belt:			
Width:	Thickness:	Expansion:	Fastness:
39mm +/- 1mm	1mm +/- 0,1mm	5,5 - 6,5 %	min. 15000 N

stich pattern	min. required force
12x12mm	3,5 kN
30x12mm	5,3 kN
30x17mm	5,3 kN
30x30mm	7,0 kN

...

Load application device II

...

No.	Name	Information	Quantity
1	main belt - 39mm	-	1
2	hip belt (upper/lower) - 39mm	-	2
3	stitch pattern (30x17)	stich: 77, thread: 30	4

strech lenght	(+/-5mm)					
	Q 0	Q 1	Q 1,5	Q 3	Q 6	Q 10
main belt (A)	1740mm	1850mm	1900mm	2000mm	2000mm	2100mm
hip belt (B)	530mm	560mm	600mm	630mm	660mm	700mm
lower dimension (C)	125mm	150mm	150mm	170mm	200mm	200mm
mid dimension (D)	270mm	300mm	350mm	380mm	380mm	400mm

Belt:			
Width:	Thickness:	Expansion:	Fastness:
39mm +/- 1mm	1mm +/- 0,1mm	5,5 - 6,5 %	min. 15000 N

stich pattern	min. required force
12x12mm	3,5 kN
30x12mm	5,3 kN
30x17mm	5,3 kN
30x30mm	7,0 kN

..."

Annex VIII

Collective amendments – Regulations Nos. 12, 94 and 95

Amendments adopted to ECE/TRANS/WP.29/GRSP/2013/6 (see para. 47 of this report)

A. Proposal for Supplement 3 to the 04 series of amendments to Regulation No. 12 (Protection of drivers against the steering mechanism in the event of impact)

Through all the text of the Regulation replace the word "IPXXB" with "degree IPXXB"

Paragraph 5.5.1., amend to read:

"5.5.1. Protection against electrical shock
..."

B. Proposal for Supplement 5 to 02 series of amendments to Regulation No. 94 (Protection of occupants against frontal collision)

Through all the text of the Regulation replace the word "IPXXB" with "degree IPXXB"

Paragraph 5.2.8.1., amend to read:

"5.2.8.1. Protection against electrical shock
..."

C. Proposal for Supplement 4 to the 03 series of amendment to Regulation No. 95 (Protection of occupants against lateral collision)

Through all the text of the Regulation replace the word "IPXXB" with "degree IPXXB"

Paragraph 5.3.6.1., amend to read:

"5.3.6.1. Protection against electrical shock
..."

Annex IX

[English only]

List of GRSP 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>
Frontal Impact (FI)	Mr. Pierre Castaing (France) Phone : +33 1-69801750 Fax : +33 1-69801719 email : pierre.castaing@utac.com	December 2014	
Harmonized side impact dummies	Ms. Mary Versailles (USA) Phone : +1 202 366 20 57 Fax : +1 202 493 29 90 email : mary.versailles@dot.gov	December 2015	
Head Restraints (GTR7-Phase 2)	Mr. Bernard Frost (UK) Phone : +44-(0)207 9442107 Fax : +44-(0)207 9449623 email : bernie.frost@dft.gsi.gov.uk	December 2013	OICA
Hydrogen and fuel cells subgroup safety (SGS)	Mr. Kazuyuki Narusawa (Japan) Phone : +81 4-22413218 Fax : +81 4-22768604 email : narusawa@ntsel.go.jp	Expired	USA
Child Restraint Systems (CRS)	Mr. Pierre Castaing (France) Phone : +33 1-69801750 Fax : +33 1-69801719 email : pierre.castaing@utac.com	December 2014	
Pedestrian Safety (GTR9-Phase 2)	Mr. Richard Damm (Germany) Tel.: +49 (0) 228 99 300 4302 Fax: +49 (0) 228 99 300 807 4302 email: richard.damm@bmvbs.bund.de	June 2014	
Pole Side Impact (PSI)	Mr. Robert Hogan (Australia) Phone : +61 2 62 74 72 66 Fax : +61 2 62 74 74 77 email : robert.hogan@infrastructure.gov.au	March 2014	
Electric Vehicle Safety (EVS)	Mr. N. Nguyen (USA), (vice-chaired by the European Union and China) Phone: +1 202 366 69 34 Fax: +1 202 493 29 90 email : nha.nguyen@dot.gov	December 2014	Japan
Rechargeable Energy Storage Systems (REESS)	Mr. G. Kellermann (Germany) Phone : +49 228 300 43 04 Fax : +49 228 300 807 43 04 email : gerd.kellermann@bmvbs.bund.de	November 2014	OICA