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### World Forum for Harmonization of Vehicle Regulations

#### Working Party on General Safety Provisions

106<sup>th</sup> session

Geneva, 5–9 May 2014

## Report of the Working Party on General Safety Provisions on its 106<sup>th</sup> session (5–9 May 2014)

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## I. Attendance

1. The Working Party on General Safety Provisions (GRSG) held its 106th session from 5 (afternoon) to 9 May 2014 (morning) in Geneva. The meeting was chaired by Mr. A. Erario (Italy). 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, ECE/TRANS/WP.29/690/Amend.1 and Amend.2): Belgium, Canada, Czech Republic, Finland, France, Germany, Hungary, India, Italy, Luxembourg, Kuwait, Japan, Netherlands, Norway, Poland, Qatar, Republic of Korea, Russian Federation, Saudi Arabia, South Africa, Spain, Sweden, Switzerland, Turkey and United Arab Emirates, United Kingdom of Great Britain and Northern Ireland. An expert from the European Commission (EC) also participated. Experts from the following non-governmental organizations participated: European Association of Automotive Suppliers (CLEPA), European Liquefied Petroleum Gas Association (AEGPL), Fédération Internationale de l'Automobile (FIA), International Motorcycle Manufacturers Association (IMMA), International Organization of Motor Vehicle Manufacturers (OICA) and International Road Transport Union (IRU). Upon the special invitation of the Chair, an expert from the International Association of the Body and Trailer Building Industry (CLCCR) participated.

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

*Documentation:* ECE/TRANS/WP.29/GRSG/2014/1 and Add.1  
Informal document GRSG-106-01

2. GRSG considered and adopted the agenda proposed for the 106<sup>th</sup> session (ECE/TRANS/WP.29/GRSG/2014/1 and Add.1).

3. GRSG also adopted the running order for the session as proposed by the Chair in GRSG-106-01. GRSG noted the main decisions of the World Forum WP.29 taken during its sessions of November 2013 and March 2014 (report ECE/TRANS/WP.29/1106 and ECE/TRANS/WP.29/1108).

4. The informal documents distributed during the session are listed in Annex I of this report. The GRSG informal working groups are listed in Annex V.

## III. Regulation No. 107 (M<sub>2</sub> and M<sub>3</sub> vehicles) (agenda item 2)

### A. Proposals for further amendments

*Documentation:* ECE/TRANS/WP.29/GRSG/2013/14  
ECE/TRANS/WP.29/GRSG/2014/2  
ECE/TRANS/WP.29/GRSG/2014/3  
ECE/TRANS/WP.29/GRSG/2014/4  
ECE/TRANS/WP.29/GRSG/2014/5  
ECE/TRANS/WP.29/GRSG/2014/6  
ECE/TRANS/WP.29/GRSG/2014/19  
Informal documents GRSG-106-09, GRSG-106-19, GRSG-106-23, GRSG-106-25 and GRSG-106-28

5. The expert from Germany introduced GRSG-106-23 superseding ECE/TRANS/WP.29/GRSG/2013/14 and proposing new requirements to prevent accidents in the case of an open engine access panel. GRSG noted a number of comments. GRSG adopted the proposal, as reproduced below, and requested the secretariat to submit it to WP.29 and AC.1 for

consideration at their November 2014 sessions, as draft Supplement 2 to the 05 series of amendments and as draft Supplement 1 to the 06 series of amendments to UN Regulation No. 107.

*Annex 3, insert a new paragraph 7.3.1., to read:*

**"7.3.1. If the engine compartment of a vehicle is located to the rear of the driver's compartment, it shall not be possible to start the engine from the driver's position when the main engine access panel located in the rear face of the vehicle is open and which provide direct access to parts that represent a hazard when the engine is running (e.g. pulley of belt drives)."**

6. The expert from Germany introduced ECE/TRANS/WP.29/GRSG/2014/2 clarifying the technical provisions for low floor vehicles. GRSG adopted the proposal, as reproduced below, and requested the secretariat to submit it to WP.29 and AC.1 for consideration at their November 2014 sessions, as a part (see para. 5 above) of draft Supplement 2 to the 05 series of amendments and of draft Supplement 1 to the 06 series of amendments to UN Regulation No. 107.

*Annex 8, paragraph 3.1., amend to read:*

"3.1. Steps

The height of the first step ..... of Class II, III and B. In the case where only one service door meets this requirement there **shall** be no barrier or sign which prevents that door from being used as both an entrance and an exit.

As an alternative for vehicles of Class I and A, the first step from the ground shall not exceed 270 mm in two door openings, one entrance and one exit.

**In low floor vehicles only a kneeling system, but not a retractable step, may be engaged.**

**In other vehicles either a kneeling system and/or a retractable step may be engaged.**

The height of steps in ....."

7. The expert from Germany presented ECE/TRANS/WP.29/GRSG/2014/3 proposing to introduce the automatic activation of the hazard warning lights upon detection of excess temperatures in the engine and/or the heater compartment. The expert from OICA stressed the need to insert transitional provisions and announced the preparation of a concrete proposal for consideration at the next session. GRSG adopted the proposal, as reproduced below, and requested the secretariat to submit it to WP.29 and AC.1 for consideration at their March 2015 sessions, as draft Supplement 3 to the 05 series of amendments and as draft Supplement 2 to the 06 series of amendments to UN Regulation No. 107. GRSG underlined the need that WP.29 shall adopt these amendments together with an parallel amendments to UN Regulation No. 48 to be submitted by the Working Party on Lighting and Light-signalling (GRE). The expert from Germany volunteered to submit an official document for consideration by GRE at its October 2014 session.

*Annex 3, paragraph 7.5.1.5., amend to read:*

"7.5.1.5. In the case of vehicles having the engine located to the rear of the driver's compartment, the compartment shall be equipped with an alarm system providing the driver with both an acoustic and a visual signal, **and activating the hazard warning signal** in the event of excess temperature in the engine compartment and in each compartment where a combustion heater is located."

*Annex 3, paragraph 7.5.6.2., amend to read:*

"7.5.6.2. Upon detection, the system given in paragraph 7.5.6.1. shall provide the driver with both an acoustic and a visual signal in the driver's compartment **and shall activate the hazard warning signal.**"

8. The expert from Hungary introduced ECE/TRANS/WP.29/GRSG/2014/4 proposing to simplify the current provisions of paragraph 7.6.8.2. in Annex 3 of the Regulation. GRSG adopted

the proposal, as reproduced below, and requested the secretariat to submit it to WP.29 and AC.1 for consideration at their November 2014 sessions, as a part (see paras. 5 and 6 above) of draft Supplement 2 to the 05 series of amendments and of draft Supplement 1 to the 06 series of amendments to UN Regulation No. 107.

*Annex 3, paragraphs 7.6.8.2. and 7.6.8.2.1., amend to read:*

"7.6.8.2. Every emergency window shall **either**:

7.6.8.2.1. **Be capable of being easily and instantaneously operated from inside and from outside the vehicle by means of a device recognised as satisfactory. This provision includes the possibility of using e.g. panes of laminated glass or plastic material, or"**

9. The expert from OICA introduced GRSG-106-19 supplementing his proposal ECE/TRANS/WP.29/GRSG/2014/5 to clarify the current transitional provisions of UN Regulation No. 107. Finally, GRSG adopted ECE/TRANS/WP.29/GRSG/2014/5, as amended below, and requested the secretariat to submit it to WP.29 and AC.1 for consideration at their November 2014 sessions, as a part (see paras. 5, 6 and 8 above) of draft Supplement 2 to the 05 series of amendments and of draft Supplement 1 to the 06 series of amendments to UN Regulation No. 107.

*Paragraph 10.24., amend to read:*

"10.24. Notwithstanding paragraphs 10.22. and 10.23., **Contracting Parties applying this Regulation shall continue to accept type approvals granted to the preceding series of amendments, which are not affected by the 05 series of amendments.**"

*Add a new paragraph 10.25., to read:*

**"10.25. Contracting Parties applying this Regulation shall not refuse to grant extensions of approval for vehicles which are not affected by the 05 series of amendments."**

10. Recalling her presentation at the previous GRSG session (GRSG-105-32), the expert from Sweden introduced ECE/TRANS/WP.29/GRSG/2014/6 proposing new test requirements for automatic fire suppression systems in the engine and/or heater compartment of buses and coaches. GRSG welcomed the document and noted general support. Following the discussion on the scope and purpose of the new requirements, GRSG agreed to have a final review of this subject at its next session in October 2014. In this respect, the Chair invited all experts to reflect on the possible adoption of ECE/TRANS/WP.29/GRSG/2014/6 as optional requirements through a Supplement to the 06 series of amendments or as mandatory requirements through a new series of amendments together with appropriate transitional provisions, including amendments to the markings.

11. The expert from Belgium presented GRSG-106-28 superseding ECE/TRANS/WP.29/GRSG/2014/19 and amending the safety prescriptions for trolleybuses to update these according to the respective electrical standard EN 50502. The expert from the Russian Federation introduced GRSG-106-09 listing a number of suggestions to improve the proposed text. GRSG adopted the document, as reproduced in Annex II to this report, and requested the secretariat to submit it to WP.29 and AC.1 for consideration at their November 2014 sessions, as a part (see paras. 5, 6, 8 and 9 above) of draft Supplement 1 to the 06 series of amendments to UN Regulation No. 107, subject to a final review by GRSG at its next session in October 2014.

12. The expert from EU presented GRSG-106-25 proposing to align the provisions of UN Regulation No. 107 on the loading conditions of the baggage compartment with those of the corresponding EU Regulation. GRSG noted general support on the proposal and requested the secretariat to distribute GRSG-106-25 with an official symbol for further consideration at its next session.

## **B. Requirements for service doors, windows and emergency exits**

*Documentation:* ECE/TRANS/WP.29/GRSG/2014/7  
Informal document GRSG-106-18

13. Recalling the discussion at the previous session of GRSG on the provisions on the access to escape hatches, the expert from Hungary introduced ECE/TRANS/WP.29/GRSG/2014/7 proposing updated amendments. GRSG noted a number of concerns and reservations on the proposal. Following the discussion, GRSG did not support the proposal and agreed to remove it from the agenda, subject to a new document to be submitted by the expert from Hungary.

14. The expert from OICA presented GRSG-106-18 amending the definition of "overnight locking systems" to clarify that systems, which were intended to be operated by passengers from inside the vehicle, were not considered as overnight locking systems. GRSG adopted the proposal and requested the secretariat to submit it to WP.29 and AC.1 for consideration at their November 2014 sessions, as a part (see paras. 5, 6, 8, 9 and 11 above) of draft Supplement 1 to the 06 series of amendments to UN Regulation No. 107.

## **IV. Regulation No. 34 (Prevention of fire risks) (agenda item 3)**

*Documentation:* ECE/TRANS/WP.29/GRSG/2014/16  
Informal documents GRSG-106-20, GRSG-106-33 and GRSG-106-39

15. The expert from Japan gave a presentation (GRSG-106-33) justifying the proposed amendments in ECE/TRANS/WP.29/GRSG/2014/16 as amended by GRSG-106-20 to prevent vehicles from fire risks under certain conditions in the event of a rear collision. GRSG noted a number of comments. Following the discussion, GRSG adopted GRSG-106-39, as reproduced in Annex III to this report, and requested the secretariat to submit it to WP.29 and AC.1 for consideration at their November 2014 sessions, as draft 03 series of amendments to UN Regulation No. 34, subject to a final review by GRSG at its next session in October 2014.

## **V. Regulation No. 43 (Safety glazing) (agenda item 4)**

*Documentation:* ECE/TRANS/WP.29/GRSG/2014/8  
ECE/TRANS/WP.29/GRSG/2014/9  
ECE/TRANS/WP.29/GRSG/2014/14  
ECE/TRANS/WP.29/GRSG/2014/15  
Informal documents GRSG-106-02, GRSG-106-04, GRSG-106-05, GRSG-106-10, GRSG-106-13, GRSG-106-16, GRSG-106-21 and GRSG-106-30

16. The expert from Germany, chairing the Informal Group on Plastic Glazing (IGPG), reported on the good work progress made by the group during its eighth and ninth meetings (Paris, 27-29 November 2013; Berlin, 25-26 March 2014) (GRSG-106-13). On behalf of IGPG, he introduced GRSG-106-16 proposing new provisions on plastic glazing for windscreens and laminated plastic panes other than windscreens. GRSG noted some comments and agreed to resume consideration of this subject at its next session. The secretariat was requested to distribute GRSG-106-16 with an official symbol.

17. The expert from Germany introduced ECE/TRANS/WP.29/GRSG/2014/8 proposing an amendment to UN Regulation No. 43 to cope with the difficulties of technical services located at high altitudes when fulfilling the barometric pressure conditions required for the impact test. The expert from CLEPA preferred to adopt an amendment (ECE/TRANS/WP.29/GRSG/2014/9) to the boiling water test procedure. GRSG adopted ECE/TRANS/WP.29/GRSG/2014/9, as reproduced below, and requested the secretariat to submit it to WP.29 and AC.1 for consideration at their

November 2014 sessions, as draft Supplement 3 to the 01 series of amendments to UN Regulation No. 43.

*Annex 3, paragraph 5.1.*, amend to read:

"5.1. Procedure

Heat to 100 °C **+0 °C / -2 °C** three samples or three square test pieces ..... specified period of time, care being taken to avoid undue thermal shock. **The test shall be carried out in an oven if the boiling water temperature is outside the specified tolerance.** If samples are cut from windscreens, one edge of each such sample shall be part of an edge of the windscreen."

18. The expert from OICA introduced ECE/TRANS/WP.29/GRSG/2014/14 proposing an amendment to UN Regulation No. 43 to avoid administrative burdens on small glazing which were not required for the driver's forward or rearward field of vision. The expert from Turkey raised concerns on possible injury risk by glazing fractures in case of a lateral collision. The expert from France underlined the need to correct the French translation. The expert from Germany raised concerns and preferred to defer the adoption of the document to the next session of GRSG.

19. GRSG agreed to remove the square brackets, but to keep the text and figures. GRSG adopted ECE/TRANS/WP.29/GRSG/2014/14 and requested the secretariat to submit it to WP.29 and AC.1, as a separate document, for consideration at their November 2014 sessions, as draft Supplement 3 to the 01 series of amendments to UN Regulation No. 43, subject to a final review by GRSG at its October 2014 session.

20. On behalf of IGPG, the expert from France introduced document ECE/TRANS/WP.29/GRSG/2014/15 proposing new definitions on interior and exterior glazing and updated provisions of Annex 21 on the installation of safety glazing on vehicles. GRSG adopted ECE/TRANS/WP.29/GRSG/2014/15 and requested the secretariat to submit it to WP.29 and AC.1 for consideration at their November 2014 sessions, as part (see para. 17 above) of draft Supplement 3 to the 01 series of amendments to UN Regulation No. 43.

21. The expert from CLEPA introduced GRSG-106-30 correcting an error in Annex 6 to UN Regulation No. 43, 01 series of amendments. GRSG requested the secretariat to prepare an erratum.

22. The experts from Germany and CLEPA withdrew their documents GRSG-106-02 and GRSG-106-05.

23. Referring to the discussion at the March 2014 session of WP.29 (GRSG-106-04), the expert from the Republic of Korea gave a presentation on the result of a national investigation on defects of panoramic sunroofs (GRSG-106-21). In this respect, he proposed an amendment to Global Technical Regulation (GTR) No. 6 on glazing (GRSG-106-10). GRSG noted a number of comments and concerns that the amendments to the drop test were not appropriate. The experts from Canada and Germany were of the opinion that further amendments to the GTR were necessary. Following the discussion, GRSG agreed to keep GRSG-106-10 on the agenda and to resume consideration of this subject at its next session. The Chair invited all experts to send, in the meantime, their comments to the expert from the Republic of Korea (e-mail: katrietf@ts2020.kr). He also invited the experts from Germany and the Republic of Korea to jointly prepare a concrete proposal.

## **VI. Regulation No. 46 (Devices for indirect vision) (agenda item 5)**

*Documentation:* ECE/TRANS/WP.29/GRSG/2013/5  
ECE/TRANS/WP.29/GRSG/2013/21  
ECE/TRANS/WP.29/GRSG/2014/10  
ECE/TRANS/WP.29/GRSG/2014/17  
Informal documents GRSG-106-08 and GRSG-106-22

24. The expert from the Netherlands, chairing the informal group on Camera-Monitor Systems (CMS), reported on the work progress made by the group during its meetings held in Cologne on 5-6 February 2014 and in Berlin on 27-28 March 2014 (GRSG-106-08). He announced the intention of CMS to submit, for consideration at the next GRSG session, a final proposal to allow replacement of all mirrors with camera-monitor systems and added that GRSG would be in the position to adopt the proposal in May 2015 at earliest. He concluded that the mandate of CMS was limited to end of 2014 and expressed the group's wish to extend the mandate by one year. The GRSG Chair volunteered to seek the consent of WP.29, at its June 2014 session, for extending the mandate until the end of 2015. The expert from OICA announced the organization, for the next session of GRSG, of a demonstration of vehicles equipped with camera-monitor systems.

25. The expert from Germany withdrew ECE/TRANS/WP.29/GRSG/2013/21. He introduced ECE/TRANS/WP.29/GRSG/2014/17 on new requirements for the installation of exterior mirrors with a folding mechanism that can be operated electronically or automatically unfold above a certain vehicle speed. GRSG noted a number of comments and agreed to resume consideration of the proposals at the next GRSG session on the basis of an updated official document by Germany.

26. The expert from OICA withdrew ECE/TRANS/WP.29/GRSG/2014/10.

27. The expert from Japan introduced GRSG-106-22 superseding document ECE/TRANS/WP.29/GRSG/2013/5. GRSG noted a number of concerns and different positions on the interpretation of the proposed paragraphs. GRSG agreed to set up, if necessary, a group of interested experts under the lead of Japan to clarify the interpretation issues of both UN Regulations Nos. 34 and 46. Following the discussion, GRSG agreed to resume consideration of this subject at its next session in October 2014, on the basis of a proposal to be tabled by the group of interested experts.

## **VII. Regulation No. 58 (Rear under run protection) (agenda item 6)**

*Documentation:* ECE/TRANS/WP.29/GRSG/2014/11  
ECE/TRANS/WP.29/GRSG/2014/18  
Informal documents GRSG-106-11, GRSG-106-26, GRSG-106-32 and GRSG-106-40

28. Recalling the purpose of ECE/TRANS/WP.29/GRSG/2013/27, the expert from Germany presented ECE/TRANS/WP.29/GRSG/2014/18 and GRSG-106-26 introducing into UN Regulation No. 58 more stringent requirements for rear underrun protection devices. The expert from OICA proposed ECE/TRANS/WP.29/GRSG/2014/11 on alternative provisions. The expert from Germany presented GRSG-106-32 with a comparison of the proposed requirements listed in the documents. The expert from CLCCR presented some observations and recommendations of his organization (GRSG-106-11). The expert from Sweden raised concerns related to the test conditions for type-approval of rear underrun protection devices (GRSG-106-40). GRSG noted a number of comments.

29. Following the discussion, GRSG agreed to resume consideration at its next session in October 2014, on the basis of a revised official document to be prepared by the experts from



Germany jointly with the experts from Sweden, CLCCR and OICA. The secretariat was requested to keep GRSG-106-32 on the agenda.

## **VIII. Regulation No. 67 (LPG vehicles) (agenda item 7)**

*Documentation:* ECE/TRANS/WP.29/GRSG/2013/29  
Informal document GRSG-106-12

30. Recalling the discussion on ECE/TRANS/WP.29/GRSG/2013/29 at the previous session of GRSG, the expert from AEGPL presented GRSG-106-12 supplementing his proposal to insert into UN Regulation No. 67 new provisions for preventing a flow of liquefied petroleum gas (LPG) into the petrol or diesel tank, and vice versa. GRSG noted some comments. The expert from Germany raised a study reservation and preferred to organize, if necessary, a meeting with interested experts to further discuss this subject. GRSG agreed to resume consideration on this matter at its next session on the basis of a revised proposal jointly prepared by the experts from Germany and AEGPL.

## **IX. Regulation No. 110 (CNG vehicles) (agenda item 8)**

*Documentation:* Informal documents GRSG-106-07, GRSG-106-15, GRSG-106-24, GRSG-106-27 and GRSG-106-29

31. The expert from Canada gave a presentation on high pressure cylinders for the onboard storage of natural gas as a fuel for motor vehicles (GRSG-106-29). He underlined the need to harmonize worldwide the test requirements for the CNG containers and proposed to align the provisions of Annex 3 to UN Regulation No. 110 with those of standard ISO 11439:2013. He added that GRSG should also consider simply inserting into Annex 3, references to ISO 11439. GRSG noted the decision of WP.29 that a reference in a UN Regulation to a private standard should not be adopted without free availability of that standard (see report ECE/TRANS/WP.29/1108, para. 39). The expert from OICA questioned the relevancy of the ISO standard, if all provisions were included into the UN Regulation. The Chair invited the gas experts to prepare an official document for consideration at the next GRSG session. The secretariat was requested to keep GRSG-106-29 on the agenda as a reference document.

32. Recalling the discussion at the previous session of GRSG, the expert from the Netherlands presented GRSG-106-07 proposing new provisions on a directional discharge of the pressure relief devices of GNG containers. GRSG noted a number of comments on the possible location of the containers on the vehicle and questioned the need to also address vehicles with LNG or even hydrogen containers. Following the discussion, GRSG agreed to resume consideration at its next session in October 2014, on the basis of a revised proposal to be submitted by the expert from the Netherlands.

33. The expert from Belgium presented GRSG-106-15 reflecting the current provisions of UN Regulation No. 110 on the periodic requalification of CNG gas cylinders (Annex 3A) and LNG tanks (Annex 3B). She questioned the differences in the periodicity for the inspection of such cylinders and tanks. Following the discussion, GRSG underlined the need to investigate this subject and agreed to keep GRSG-106-15 on the agenda.

34. The expert from the Netherlands introduced GRSG-106-24 proposing amendments on the installation of LNG fuel tanks to avoid them touching the ground. GRSG noted some comments and agreed to resume consideration of this subject at its next session on the basis of an updated proposal by the Netherlands.

35. The expert from Germany withdrew GRSG-105-31. He presented GRSG-106-27 requiring the mandatory exterior protection of gas cylinders instead of leaving the decision up to the

manufacturer. The experts from France and OICA preferred to adopt such mandatory provisions together with a set of transitional provisions. GRSG agreed to resume consideration at its next session in October 2014, on the basis of a revised proposal by the expert from Germany.

## **X. Regulation No. 118 (Burning behaviour) (agenda item 9)**

*Documentation:* ECE/TRANS/WP.29/GRSG/2014/13  
Informal document GRSG-106-17

36. The expert from the Netherlands proposed to extend the scope of UN Regulation No. 18 to vehicles equipped with propulsion systems using CNG (ECE/TRANS/WP.29/GRSG/2014/13). GRSG noted a number of comments and agreed to resume consideration of this subject at a later session awaiting the outcome of deliberations on the automatic fire suppression systems into UN Regulation No. 107 (see para. 10 above) and the proposed directional discharge of the pressure relief devices of GNG containers under UN Regulation No. 110 (see para. 32).

37. The expert from OICA presented GRSG-106-17 updating the reference to standard ISO 6722 in the provisions on the cable test. The expert from OICA volunteered to prepare a justification with the differences between the former and the new standard. GRSG agreed to resume consideration of this subject at its next session on the basis of an official document and requested the secretariat to provide a copy of the corresponding ISO standard.

## **XI. Regulation No. 121 (Identification of controls, tell-tales and indicators) (agenda item 10)**

*Documentation:* ECE/TRANS/WP.29/2012/30 and Corr.1  
ECE/TRANS/WP.29/GRSG/2014/12  
Informal document GRSG-106-35

38. The expert from OICA introduced GRSG-106-35 justifying the proposal ECE/TRANS/WP.29/GRSG/2014/12 to adapt the provisions on multi-function displays to technical progress. GRSG noted a number of comments and agreed to submit it for consideration to the next session of the Working Party on Brakes and Running Gear (GRRF). GRSG also agreed to resume consideration at its next session awaiting the comments of GRRF.

39. Recalling the purpose of ECE/TRANS/WP.29/2012/30 and its Corr.1 (still pending on the agenda of WP.29), the Chair informed GRSG about the adoption by GRRF of the revised transitional provisions. He expected that draft 01 series of amendments to UN Regulation No. 121 would be considered by WP.29 and AC.1 at their June 2014 sessions.

## **XII. Revision and extension of approvals (agenda item 11)**

40. GRSG noted the decision of WP.29 (see report ECE/TRANS/WP.29/1106, para. 12) to no longer develop specific provisions for granting revisions and extension to type approvals as such provisions were now covered by draft Revision 3 to the 1958 Agreement (ECE/TRANS/WP.29/2014/53). GRSG also noted that the entry into force of Revision 3 to the Agreement was expected in March 2016. GRSG agreed to remove this item from the agenda.

### **XIII. International Whole Vehicle Type Approval (agenda item 12)**

*Documentation:* Informal document GRSG-104-39-Rev.3

41. GRSG reviewed again the list of all candidate UN Regulations identified for the IWVTA scheme under the responsibility of GRSG and agreed on the actions as reflected in the revised document GRSG-104-39-Rev.3. The IWVTA ambassador volunteered to report back to the informal group. He announced the intention of IWVTA to distribute to all Contracting Parties a questionnaire on a detailed review of Lists A and B in draft UN Regulation No. 0. GRSG agreed to resume consideration of this subject at its next session.

### **XIV. Need to develop a new Regulation on odometer equipment (agenda item 13)**

*Documentation:* Informal documents GRSG-106-06, GRSG-106-36 and GRSG-106-37

42. Recalling the discussion at the previous session of GRSG, the expert from Belgium gave a presentation (GRSG-106-36) on the need to set up new provisions on the odometer. He introduced GRSG-106-06 proposing draft amendments to be included into UN Regulation No. 39 on speedometers. The expert from FIA gave a demonstration on the easy manipulation of modern odometers (GRSG-106-37). He stressed the urgent need to set up anti-tempering measures for odometers. A number of experts were of the opinion that WP.29 should even develop some periodical technical inspection requirements for insertion into UN Rule No. 2 annexed to the 1997 Agreement.

43. GRSG welcomed the proposal by Belgium. GRSG noted general support but a number of Contracting Parties requested that the proposed amendments shall be supplemented with provisions for the mandatory installation of odometer on vehicles, including anti-tempering test requirements and transitional provisions. GRSG agreed to resume consideration of this subject at its next session in October 2014 on the basis of new proposal by Belgium, taking into account the comments received.

### **XV. Automatic Emergency Call Systems (agenda item 14)**

*Documentation:* Informal documents GRSG-106-03 and GRSG-106-31

44. The expert from the Russian Federation, chairing the informal working group on Accident Emergency Call System (AECS), reported on the work results of the recent three meetings. He underlined the need to align UN Regulations Nos. 94 and 95. He announced that the next meeting was scheduled to be held in Turin, Italy on 2-4 September 2014. GRSG noted GRSG-106-03 proposing the Terms of Reference and Rules of Procedures of AECS and adopted them as reproduced in Annex IV to this report.

45. GRSG also noted the lack in the harmonization of the different mobile communication networks available in the regions and the dilemma of AECS to develop test requirements for the different data transmission processes and protocols. GRSG endorsed the proposed introduction of different classes of AECS and underlined the need that the new provisions shall be performance oriented and technology neutral.

46. GRSG agreed to resume consideration of this subject at its next session in October 2014 on the basis of concrete proposal by AECS. The secretariat was requested to keep GRSG-106-31 on the agenda as a reference document.

## **XVI. Other business (agenda item 15)**

### **A. Application of amendments to different series of amendments**

*Documentation:* Informal document WP.29-162-18

47. GRSG noted WP.29-162-18 on some concerns of supplements to UN Regulation with long transitional provision periods and the administrative procedures for the submission and adoption of such amendments. The secretariat informed GRSG about the request of the Office of Legal Affairs in New York to clearly indicate, when adopting a supplement, to which series of amendments the supplement have to be addressed to, specifically in the case of UN Regulations with different series of amendments in force at the same time, due to long transitional provision periods.

48. GRSG also noted the proposal by IWVTA to indicate in the transitional provisions of future amendments a specific date (i.e. 1 September) for the application of the amendments instead of a period expressed in "months after the entry into force". This request would at the time only be needed for UN Regulations listed in UN Regulation No. 0 on IWVTA. GRSG noted no objection and endorsed that approach.

### **B. Regulation No. 105 (ADR vehicles)**

*Documentation:* ECE/TRANS/WP.29/GRSG/2014/20

49. The expert from OICA introduced ECE/TRANS/WP.29/GRSG/2014/20 aligning the three language versions of UN Regulation No. 105 and updating the references to ISO and IEC standards. GRSG reminded the decision of WP.29 (see para. 31 above) on references in UN Regulations to private standards but adopted ECE/TRANS/WP.29/GRSG/2014/20. GRSG requested the secretariat to submit it to WP.29 and AC.1 for consideration at their November 2014 sessions, as draft Supplement 2 to the 05 series of amendments to UN Regulation No. 105.

### **C. Definitions used in UN Regulations**

*Documentation:* Informal documents GRSG-106-14 and GRSG-106-34

50. GRSG noted GRSG-106-14 listing a number of incoherencies in the definitions used in UN Regulations under the responsibility of GRSG. It was agreed that experts shall, when drafting future amendments, try to harmonize the definitions.

51. Upon the request of GRE, GRSG considered a proposal to insert into the Consolidated Resolution on the Construction of Vehicles (R.E.3) new categories T, R, and S of agricultural vehicles such as agricultural trailers and towed machinery (GRSG-106-34). GRSG noted a number of amendments to the document and agreed to resume consideration of this subject at its next session in October 2014. The secretariat was requested to distribute GRSG-106-34-Rev.1 with an official symbol.

### **D. Regulation No. 116 (Vehicle alarm systems)**

*Documentation:* Informal document GRSG-106-38

52. The expert from EC informed GRSG on new innovative vehicle alarms systems such as silent alarm or door-unlocking using smart phone (GRSG-106-38) and questioned the need to develop an appropriate amendment to UN Regulation No. 116. GRSG agreed to resume consideration of this

subject at its next session in October 2014 and requested the secretariat to keep GRSG-106-38 on the agenda.

### **E. Tributes to Messrs. Ramos, Sakai and Tanahashi**

53. GRSG noted that Mr. Juan Ramos Garcia was retiring after more than 16 years of service in the Vehicle Regulations and Transport Innovations Section, of which he had served 5 years as secretary to GRSG and 11 years as secretary of WP.29. GRSG thanked him for his continued support with a long applause and wished him a long and happy retirement.

54. Learning that Messrs. Masahiko Sakai and Masaaki Tanahashi (Japan) would no longer attend the sessions, GRSG acknowledged their considerable contributions to the activities of the group. GRSG wished Mr. Tanahashi a long and happy retirement, and Mr. Sakai all the best for his future activities.

## **XVII. Provisional agenda for the 107<sup>th</sup> session**

55. The following provisional agenda was adopted for the 107<sup>th</sup> session of GRSG, scheduled to be held in Geneva from 30 September (starting at 2.30 p.m.) to 3 October (concluding at 12.30 p.m.) 2014<sup>1</sup>:

1. Adoption of the agenda.
2. Regulation No. 107 (M<sub>2</sub> and M<sub>3</sub> vehicles):
  - (a) Proposals for further amendments;
  - (b) Requirements for service doors, windows and emergency exits.
3. Regulation No. 34 (Fuel tanks).
4. Regulation No. 39 (Speedometer).
5. Regulation No. 43 (Safety glazing).
6. Regulation No. 46 (Devices for indirect vision).
7. Regulation No. 58 (Rear underrun protection).
8. Regulation No. 67 (Equipment for liquefied petroleum gases (LPG)).
9. Regulation No. 110 (Specific components for CNG).
10. Regulation No. 116 (VAS).
11. Regulation No. 118 (Burning behaviour).
12. Regulation No. 121 (Identification of controls, tell-tales and indicators).
13. International Whole Vehicle Type Approval.
14. Consolidated Resolution on the Construction of Vehicles (R.E.3).
15. Accident Emergency Call Systems (AECS).
16. Election of officers
17. Other business.

## Annex I

### List of informal documents considered during the session

#### List of informal documents (GRSG-106-...) distributed during the session (English only)

<i>No.</i>	<i>(Author) Title</i>	<i>Follow-up</i>
1	(GRSG Chair) Running order of the 106 <sup>th</sup> session of GRSG (5-9 May 2014)	(f)
2	(Germany) Proposal for an amendment to UN Regulation No. 43	(f)
3	(AECS) Terms of Reference and Rules of Procedure of the informal group of GRSG on Accident Emergency Call System (AECS)	(b)
4	(Secretariat) Defect investigation by the Republic of Korea on panorama sunroofs	(f)
5	(CLEPA) CLEPA comments on ECE/TRANS/WP.29/GRSG/2014/14 - Amendments to UN Regulation No. 43 (Safety glazing)	(f)
6	(Belgium) Proposal for draft amendments to UN Regulation No. 39 (Speedometer)	(c)
7	(Netherlands) UN Regulation No. 110 (CNG/LNG vehicles)	(c)
8	(Netherlands) Report from the informal group on Camera-Monitor Systems, UN Regulation No. 46 (Devices for indirect vision)	(f)
9	(Russian Federation) Comments and proposals on ECE/TRANS/WP.29/GRSG/2014/19 (UN Regulation No. 107 on M2 and M3 vehicles)	(f)
10	(Republic of Korea) Proposal for an amendment to UN GTR No. 6 (Safety glazing)	(d)
11	(CLCCR) Proposal for amendments to UN Regulation No. 58 (Rear Underrun Protection)	(f)
12	(AEGPL) Proposals on ECE/TRANS/WP.29/GRSG/2013/29 - Amendments to UN Regulation No. 67/01 (LPG equipment)	(c)
13	(Germany) 7th Progress report of the Informal Group on Plastic Glazing (IGPG)	(f)
14	(Secretariat) Definitions in UN Regulations	(f)
15	(Belgium) UN Regulation No. 110 (CNG/LNG vehicles)	(d)
16	(IPGP) Draft proposal for amendments to UN Regulation No. 43 (Safety glazing)	(c)
17	(OICA) Proposal for amendments to UN Regulation No. 118 (Burning behaviour)	(c)
18	(OICA) Proposal for amendments to UN Regulation No. 107 (M2 and M3 vehicles)	(a)
19	(OICA) Proposal for amendments to ECE/TRANS/WP.29/GRSG/2014/5	(a)
20	(Japan) Proposal for amendments to ECE/TRANS/WP.29/GRSG/2014/16	(b)
21	(Republic of Korea) Defect Investigation on Panoramic Sunroof in Korea	(f)
22	(Japan) Proposal for amendments to UN Regulation No. 46 (Devices for indirect vision)	(e)
23	(Germany) Proposal for amendments to UN Regulation No. 107 (M2 and M3 vehicles)	(b)
24	(The Netherlands) UN Regulation No. 110 (CNG/LNG vehicles)	(c)
25	(EC) Proposal for amendments to UN Regulation No. 107 (M2 and M3 vehicles)	(c)
26	(Germany) Proposal for amendments to UN Regulation No. 58 (Rear Underrun Protection)	(c)
27	(Germany) Proposal for amendments to UN Regulation No. 110	(e)
28-Rev.1	(Secretariat) Updated Proposal for a Supplement to the 06 series of amendments to UN	(a)

<sup>1</sup> GRSG noted that the deadline for submission of official documents to the UNECE secretariat was 4 July 2014, twelve weeks prior to the session.

<i>No.</i>	<i>(Author) Title</i>	<i>Follow-up</i>
	Regulation No. 107 (Trolleybuses)	
29	(Canada) ECE R110 Annex & ISO 11439 - High pressure cylinders for the on-board storage of natural gas as a fuel for automotive vehicles	(f)
30	(CLEPA) Proposal for a Corrigendum to UN Regulation No. 43, 01 series of amendments	(f)
31	(AECS) Proposal for an amendment to UN Regulation No. 43	(d)
32	(Germany) UN R58 - RUPD requirements: Comparison of proposed requirements of ECE/TRANS/WP.29/GRSG/2014/11 and ECE/TRANS/WP.29/GRSG/2014/18	(d)
33	(Japan) Proposal for amendment of UN Regulation No. 34	(f)
34-Rev.1	(Secretariat) Revised Proposal for amendments ECE/TRANS/WP.29/78/Rev.2 - Consolidated Resolution on the Construction of Vehicles (R.E.3)	(c)
35	(OICA) Controls, tell-tale and indicator (UN R121.00) - Focus on common space regarding the current Regulation	(f)
36	(Belgium) Proposal for amendments to UN Regulation No. 39 (Speedometer)	(f)
37	(FIA) Protection against mileage fraud	(f)
38	(EC) UN Regulation No. 116 and innovative vehicle alarm systems / anti-theft systems	(d)
39	(Secretariat) Proposal for the 03 series of amendments to Regulation No. 34 (Prevention of fire risks) as adopted by GRSG at its 106th session	(b)
40	(Sweden) Concerns regarding the proposal for amendments to UN Regulation No. 58 (Rear Underrun Protection)	(f)

### List of informal documents distributed linked to a previous session of GRSG (English only)

<i>No.</i>	<i>(Author) Title</i>	<i>Follow-up</i>
GRSG-104-39-Rev.3	(IWVTA Ambassador) Priority of Discussion on Technical Requirements for IWVTA and Draft Report to IWVTA Informal Meeting	(e)

#### Notes:

- (a) Adopted/endorsed with no change for consideration at WP.29.
- (b) Adopted/endorsed with changes for consideration at WP.29.
- (c) Resume consideration on the basis of an official document.
- (d) Kept as reference document/continue consideration.
- (e) Revised proposal for the next session.
- (f) Consideration completed or to be superseded.

## Annex II

### Draft amendments to Regulation No. 107 (para. 11) (based on ECE/TRANS/WP.29/GRSG/2014/19)

Annex 12,

Paragraphs 1.1. to 1.2.2., amend to read:

"1.1. "Line voltage" means the voltage provided to the **trolleybus** from the external power supply.

Trolleybuses shall be designed to operate at a rated line voltage of either:

- (a) 600 V (a working range of 400 to 720 V, **and 800 V DC for 5 minutes**); or
- (b) 750 V (a working range of 500 to 900 V, **and 1,000 V DC for 5 minutes**); and
- (c) **Withstand over-voltages of 1,270 V for 20 ms.**

1.2. The electrical circuits of a trolleybus are classified as **according to their rated voltage in the following classes**:

1.2.1. "**Voltage class A**" means a:

**rated voltage  $\leq$  30 V AC; and**

**rated voltage  $\leq$  60 V DC.**

1.2.2. "**Voltage class B**" means a:

**30 V AC < rated voltage  $\leq$  1,000 V AC; and**

**60 V DC < rated voltage  $\leq$  1,500 V DC.**

Paragraph 1.2.3., shall be deleted.

Paragraphs 1.3. to 2.6., amend to read:

"1.3. Rated climatic conditions

**1.3.1.** Trolleybuses shall be designed to operate reliably under the following environmental conditions:

**1.3.1.1.** A temperature range of minus 25 °C to plus 40 °C;

**1.3.1.2.** A relative humidity of 98 per cent at temperatures up to 25°C;

**1.3.1.3.** An atmospheric pressure range from **86.6 kPa** to **106.6 kPa**;

**1.3.1.4.** An altitude range from sea level to a maximum of **1,400 m** above the sea level.

**1.3.2.** **Special environmental conditions, beyond the rated climatic conditions specified in paragraph 1.3.1. above, shall be indicated in the type-approval documentation (Annex 1, Part 1, Appendices 1 to 3) and communication form (Annex 1, Part 2, Appendices 1 to 3).**

1.4. "**Self-extinguishing material**" means a material that does not continue to burn when the ignition source is removed.

**1.5. "Insulation": there are different types of insulation:**

**1.5.1. Functional insulation: ensures the functionality of the equipment;**



- 1.5.2. **Basic insulation: protects persons from electrical hazards in systems with protective bonding;**
- 1.5.3. **Supplementary insulation: protects persons from electrical hazards in systems without protective bonding;**
- 1.5.4. **Double insulation: combination of basic and supplementary, each individually testable by a metallized intermediate layer.**
- 1.6. *"Rated insulation voltage"*
- 1.6.1. **For circuits connected to the line voltage, the rated insulation voltage ( $U_{Nm}$ ) for each part of the double insulation is the maximum line voltage according to paragraph 1.1. above; and**
- 1.6.2. **For circuits insulated from the line voltage, the rated insulation voltage ( $U_{Nm}$ ) is the maximum permanent voltage that occurs in the circuit.**
2. **Current collection**
- 2.1. **Current** shall be obtained from the contact wires by means of one or more **connecting** devices, normally comprising two **current collectors**. (A single **current collector** or a pantograph may be used in guided applications). A **current collector** shall consist of a roof mounting (trolley base), a **trolley pole**, a **current collector head** and a replaceable contact surface insert. **Current collectors** shall be mounted so that they can turn in both horizontal and vertical directions.
- A current collector shall achieve, as a minimum, a  $\pm 55^\circ$  rotation about the vertical axis of its attachment to the trolleybus and a  $\pm 20^\circ$  rotation about the horizontal axis of its attachment to the trolleybus.**
- 2.2. **Trolley poles** shall be made **either** of a material **providing insulation** or of metal covered with insulating material **representing functional insulation to avoid short circuiting between the overhead lines in case of their detachment (de-wiring)** and shall be resistant to mechanical shocks.
- 2.3. **Current** collectors shall be designed to maintain adequate positive contact with the contact wires when the wires are located at **least** between 4 and 6 metres above the ground and to allow the longitudinal axis of the trolleybus to deviate at least 4.0 metres to either side of the mean axis of the contact wires.
- 2.4. **Each trolley pole shall be equipped with a device that automatically retracts the pole in the event of the current collector becoming accidentally detached from the contact wire (de-wired).**
- 2.5. **In the event of de-wiring, contact between the retracted poles and any part of the roof shall be prevented.**
- 2.6. The **current collector** head, if **disconnected** from its normal position on the **trolley pole**, shall remain attached to the **trolley pole**.

*Paragraph 2.7.*, shall be deleted.

*Paragraph 2.8. (former)*, renumber as paragraph 2.7. and amend to read:

**"2.7. Current** collectors may be equipped with remote control from the driver's compartment, at least for retraction."

*Paragraph 2.9. (former)*, renumber as paragraph 2.8.

*Paragraph 3.5.*, amend to read:

**"3.5. All electrical circuits and circuit branches of voltage class B shall be of dual wiring. The trolleybus body may be used as a conductor for protective bonding of circuits,**

double insulated from the line voltage, of voltage class B. It also may be used as the return connection for voltage class A circuits."

Paragraph 3.7., amend to read:

- "3.7. Electrical components connected to the line voltage shall have, in addition to their basic insulation, a supplementary insulation from the trolleybus body, the onboard power supply and signal interfaces.  
 For protection of current conducting parts and metallized intermediate layers inside the passenger compartment or luggage compartment, the protection degree IPXXD shall be provided (according to ISO 20653:2013).  
 For protection of current conducting parts and metallized intermediate layers in areas other than the passenger compartment or luggage compartment and not on the roof, the protection degree IPXXB shall be satisfied (according to ISO 20653:2013).  
 For protection of current conducting parts and metallized intermediate layers on the roof with protection by distance, no protection degree is required."

Insert new paragraphs 3.7.1. and 3.7.2., to read:

- "3.7.1. External insulations, e.g. on the roof and at the traction motor with occasional conductivity and regular cleaning, shall have a minimum clearance of 10 mm.  
 They shall be mounted with shelter from weather or be designed as umbrella insulators or insulators with drip edge or another method having equivalent effects. Silicon as material or covering is recommended. In this case, the minimum creepage distance shall be 20 mm.  
 With other materials or designs or mountings or extreme operation conditions, a greater creepage distance shall be chosen. Documentation of the layout is part of the approval (see item 6.2.11. of Annex 1, Part 1, Appendices 1, 2 and 3).  
 3.7.2. Voltage class B equipment shall be marked with the lightning symbol. The symbol background shall be yellow, the bordering and the arrow shall be black.



The symbol shall also be visible on enclosures and barriers, which when removed, expose current conducting parts of voltage class B circuits. Accessibility and removability of barriers/enclosures should be considered when evaluating the requirement for the symbol."

Paragraphs 3.8. to 3.10.1., amend to read:

- "3.8. The current conducting parts of electrical components, with the exception of current collectors, surge arrestors and traction resistors, shall be protected against moisture and dust.  
 3.9. Means shall be provided for a periodic resistance test to be conducted on each basic and supplementary insulation of components with double insulation. With a new and dry trolleybus, the insulation resistance of electrical circuits at a test voltage of 1,000 V DC shall not be less than:  
 3.9.1. For each basic insulation: 10 MΩ;  
 3.9.2. For each supplementary insulation: 10 MΩ;  
 3.9.3. For the overall double insulation: 10 MΩ.  
 3.10. Wiring and apparatus

3.10.1. **Flexible wires shall be used for all circuits. The rated insulation voltage of wires to ground shall be at least the rated insulation voltage according to paragraph 1.6."**

*Paragraphs 3.10.4. and 3.10.5., amend to read:*

"3.10.4. Wiring of different voltages **classes** shall be mounted separately.

3.10.5. Wiring conduits shall be made of non-flammable **or self-extinguishing** material. **Conduits inside the passenger compartment of voltage class B shall be closed and be made of metal. Metallic conduits shall be connected to the vehicle chassis."**

*Paragraph 3.10.12., amend to read:*

"3.10.12. **Each of the insulations of voltage class B equipment onboard the trolleybus shall be tested with an AC power supply at test frequency of 50 - 60 Hz for 1 minute.**

**The test voltage ( $U_{Test}$ ) for wiring and components at the trolleybus shall be:**

**Basic Insulation:  $U_{Test} = 2 \times U_{Nm} + 1,500 \text{ V}$**

**Supplementary Insulation:  $U_{Test} = 1.6 \times U_{Nm} + 500 \text{ V}$**

**For circuits double insulated from overhead line voltage, the test voltage ( $U_{Test}$ ) shall be at least 1,500 V, or:**

**Basic Insulation:  $U_{Test} = 2 \times U_{Nm} + 1,000 \text{ V}$**

**The equivalent DC test voltage is  $\sqrt{2}$  times the AC value.**

**Reinforced insulation in trolleybuses is not allowed for circuits directly connected to overhead line."**

*Paragraphs 3.10.12.1. and 3.10.12.2., shall be deleted.*

*Paragraphs 3.11. to 3.11.2., shall be deleted.*

*Paragraphs 4.1. to 4.3., amend to read:*

"4.1. **In a trolleybus, each circuit energized by an overhead line voltage shall have double insulation of the vehicle chassis.**

4.2. **The influence of dynamic charge currents, caused by capacitive couplings between voltage class B equipment and electric chassis, shall be reduced by the protective impedance of insulating materials used in entrance areas. Stanchions and handrails at doorways, door panels and handles, mobility aid ramps and the first steps shall be made of insulating material, or covered with mechanical durable insulation or insulated from the trolleybus body.**

4.3. The trolleybus **shall** be equipped with an onboard device for permanent monitoring of leakage current or voltage between the chassis and the road surface. The device shall **automatically** disconnect the high voltage circuits from the contact system (**when trolleybus is stationary**) if the leakage current exceeds 3 mA or if the leakage voltage exceeds 60 V DC (according to EN 50122-1 or IEC 62128-1).

*Paragraphs 4.4. to 4.7., shall be deleted.*

*Annex 1, Part 1, Appendices 1, 2 and 3, insert new items 6 to 6.6.2. to read:*

**6. Special provisions for trolleybuses**

**6.1. Special environmental conditions for reliable operation:**

**6.1.1. temperature .....**

**6.1.2. external humidity level .....**

**6.1.3. atmospheric pressure .....**

6.1.4.	altitude .....
6.2.	<b>Vehicle</b>
6.2.1.	dimensions with locked poles .....
6.2.3.	supply .....
6.2.4.	rated voltage of overhead line (V) .....
6.2.5.	rated line current of vehicle (A) including auxiliary drives, HVAC.....
6.2.6.	performance .....
6.2.7.	maximum velocity (km/h: normal service/autonomous service) .....
6.2.8.	maximum inclination (%: normal service/autonomous service) .....
6.2.9.	description of main power circuits .....
6.2.10.	circuit diagrams .....
6.2.11.	protection measures (overview diagrams and drawings) .....
6.2.12.	insulation monitoring (if any) .....
6.2.13.	make and type of monitoring device .....
6.2.14.	principle of monitoring, description .....
6.2.15.	description of insulation levels of components .....
6.3.	<b>Electric motor</b>
6.3.1.	make and type of electric motor .....
6.3.2.	type (winding, excitation) .....
6.3.3.	maximum hourly/continuous power (kW) .....
6.3.4.	rated voltage (V) .....
6.3.5.	rated current (A) .....
6.3.6.	nominal frequency (Hz) .....
6.3.7.	location in the vehicle .....
6.4.	<b>Power electronics</b>
6.4.1.	make an type of traction inverter .....
6.4.2.	maximum continuous power .....
6.4.3.	cooling system .....
6.4.4.	make and type of 24V-battery charger .....
6.4.5.	maximum continuous power .....
6.4.6.	cooling system .....
6.4.7.	make and type of 3-phase AC supply .....
6.4.8.	maximum continuous power .....
6.4.9.	cooling system .....
6.5.	<b>Power supply for autonomous service:</b>
6.5.1.	storage system .....

6.5.2.	battery/supercaps .....
6.5.3.	make and type of storage system .....
6.5.4.	weight (kg) .....
6.5.5.	capacity (Ah) .....
6.5.6.	location in the vehicle .....
6.5.7.	make and type of control unit .....
6.5.8.	make and type of charger .....
6.5.9.	rated voltage (V) / minimum voltage (V), end of charge voltage (V) .....
6.5.10.	rated current (A) / max. discharge current (A), max. charge current (A) .
6.5.11.	Diagram of operation, control and safety .....
6.5.12.	Characteristics of charge periods .....
6.5.13.	motor-generator unit .....
6.5.14.	hourly/cont. power (kW) .....
6.5.15.	make and type of unit or of motor and generator .....
6.5.16.	fuel and fuel system .....
6.5.17.	location in the vehicle .....
6.6.	<b>Current collector</b>
6.6.1.	make and type of current collector .....
6.6.2.	operation of current collector .....

*Annex 1, Part 2:*

*Appendix 1, insert new items 1.13. to 1.13.1.4. to read:*

"1.13.	<b>Trolleybuses</b>
1.13.1.	<b>Special environmental conditions for reliable operation:</b>
1.13.1.1.	temperature .....
1.13.1.2.	external humidity level .....
1.13.1.3.	atmospheric pressure .....
1.13.1.4.	altitude .....

*Appendix 2, insert new items 1.9. to 1.9.1.4. to read:*

"1.9.	<b>Trolleybuses</b>
1.9.1.	<b>Special environmental conditions for reliable operation:</b>
1.9.1.1.	temperature .....
1.9.1.2.	external humidity level .....
1.9.1.3.	atmospheric pressure .....
1.9.1.4.	altitude .....

*Appendix 3*, insert new items 1.5. to 1.5.1.4. to read:

- "1.5.        **Trolleybuses**
- 1.5.1.     **Special environmental conditions for reliable operation:**
- 1.5.1.1.   **temperature .....**
- 1.5.1.2.   **external humidity level .....**
- 1.5.1.3.   **atmospheric pressure .....**
- 1.5.1.4.   **altitude .....**"

## Annex III

### Draft 03 series of amendments to Regulation No. 34 (para. 15) (based on ECE/TRANS/WP.29/GRSG/2014/16)

*Paragraph 1.2., amend to read:*

"1.2. PART II-1: At the request of the manufacturer, to the approval of vehicles of categories M, N and O approved to Part I or IV of this Regulation fitted with liquid fuel tank(s) with regard to the prevention of fire risks in the event of a frontal and/or lateral collision as well as to the approval of vehicles of categories M<sub>1</sub> and N<sub>1</sub>, which are of a total permissible mass exceeding 2.8 tonnes, and categories M<sub>2</sub>, M<sub>3</sub>, N<sub>2</sub>, N<sub>3</sub> and O, fitted with tank(s) for liquid fuel, which have been approved to Part I or IV of this Regulation with regard to the prevention of fire risks in the event of a rear collision.

PART II-2: To the approval of vehicles of categories M<sub>1</sub> and N<sub>1</sub>, which are of a total permissible mass not exceeding 2.8 tonnes, fitted with liquid fuel tank(s) approved to Part I or IV of this Regulation with regard to the prevention of fire risks in the event of a rear collision."

*Paragraph 3.1.4.2., amend to read:*

"3.1.4.2. the number of this Regulation, followed by "RI", if the vehicle is approved pursuant to Part I of the Regulation, or by "RII-1" if the vehicle is approved pursuant to Parts I or IV and to Part II-1 of the Regulation, or by "RII-2" if the vehicle is approved pursuant to Parts I or IV and to Part II-2 of the Regulation, a dash and the approval number to the right of the circle prescribed in paragraph 3.1.4.1."

*Insert new Part II-2, to read:*

#### "PART II-2 - APPROVAL OF VEHICLE WITH REGARD TO THE PREVENTION OF FIRE RISKS IN THE EVENT OF REAR COLLISION

##### 9.6. Definitions and test requirements

9.6.1. Paragraphs 7. to 8.2.2. of Part II-1 shall apply.

9.6.2. The vehicle test shall be performed according to the procedures described in Annex 4 of this Regulation.

9.6.3. After the collision test, the performance requirements of paragraphs 9.1. to 9.4. of Part II-1 shall be met."

*Insert new paragraphs 17.7. to 17.11., to read:*

"17.7. As from the official date of entry into force of the 03 series of amendments, no Contracting Party applying this Regulation shall refuse to grant or refuse to accept type approvals under this Regulation as amended by the 03 series of amendments.

17.8. As from 1 September 2018, Contracting Parties applying this Regulation shall grant type approvals only if the vehicle type to be approved meets the requirements of this Regulation as amended by the 03 series of amendments.

17.9. Contracting Parties applying this Regulation shall not refuse to grant extensions of type approvals for existing types which have been granted according to the preceding series of amendments to this Regulation.

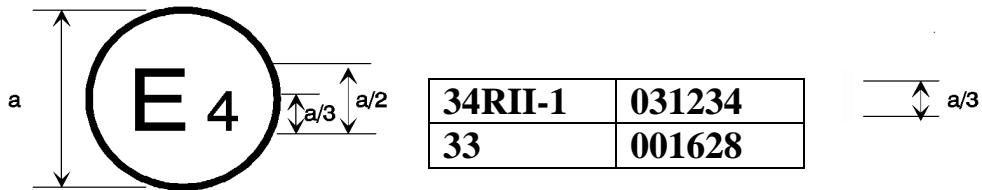
- 17.10. Even after the date of entry into force of the 03 series of amendments to this Regulation, type approvals to the preceding series of amendments to the Regulation which are not affected by the 03 series of amendments shall remain valid and Contracting Parties applying this Regulation shall continue to accept them.
- 17.11. Notwithstanding the transitional provisions above, Contracting Parties whose application of this Regulation comes into force after the date of entry into force of the most recent series of amendments are not obliged to accept type approvals which were granted in accordance with any of the preceding series of amendments to this Regulation."

Throughout Annex 2, replace the number "02" with "03".

Annex 2, Model B, amend to read:

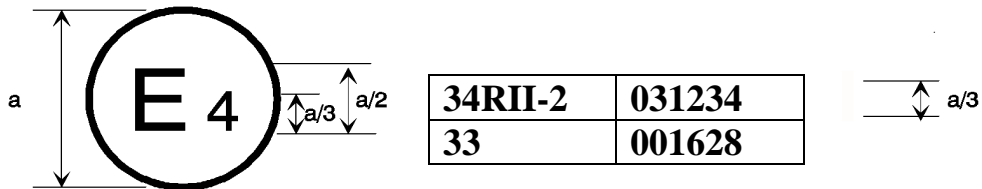
**"Model B**

(see paragraph 3.1.5. of this Regulation)



a = 8 mm minimum

The above approval mark affixed to a vehicle shows that the type concerned was approved in the Netherlands (E4) pursuant to Regulations Nos. 34 Parts I or IV and II-1 and 33\*/. The approval numbers indicated that, at the date when the respective approvals were given, Regulation No. 34 included the 03 series of amendments and Regulation No. 33 was still in its original form.



The above approval mark affixed to a vehicle shows that the type concerned was approved in the Netherlands (E4) pursuant to Regulations Nos. 34 Parts I or IV and II-2 and 33\*/. The approval numbers indicated that, at the date when the respective approvals were given, Regulation No. 34 included the 03 series of amendments and Regulation No. 33 was still in its original form."



*Annex 4*

*Paragraph 2.1.*, amend to read:

"2.1. Testing ground

The test area shall be large enough to accommodate the impactor (striker) propulsion system and to permit after-collision displacement of the vehicle struck and installation of the test equipment. The part in which vehicle collision and displacement occur shall be horizontal, flat **and uncontaminated, and representative of a normal, dry, uncontaminated road surface.**"

*Paragraph 2.2.2.*, amend to read:

"2.2.2. The impacting surface shall be flat, not less than 2,500 mm wide, and 800 mm high, and its edges shall be rounded to a radius of curvature of between 40 and 50 mm. It shall be clad with a layer of plywood 20 +/- 2 mm thick, **in good condition.**"

*Paragraph 2.4.2.*, amend to read:

"2.4.2. The velocity of collision shall be between **48 and 52 km/h.**"

## Annex IV

### **Informal group on Accident Emergency Call Systems (AECS) (para. 44)**

#### A. Terms of Reference

1. The informal group was established by WP.29 at its 160<sup>th</sup> session (report ECE/TRANS/WP.29/1104, para. 76).
2. The informal group shall develop a draft regulatory proposal for a new UN Regulation on Accident Emergency Call System (AECS) annexed to the 1958 Agreement to establish uniform technical requirements for such systems with the aim to reduce the number of people killed and injured in road accidents.
3. The informal group shall use as a basis for the discussions the Russian proposal ECE/TRANS/WP.29/2013/67 submitted and presented during 160<sup>th</sup> session of WP.29, held in Geneva on 25-28 June 2013.
4. When developing its proposal, the informal group should take full account of existing data and research in developing its regulatory proposal. It should consider pre-existing standards (e.g. ISO, SAE, EN, CEN, HELPNET, GOST/GOST R, ITU, ETSI, 3GPP guidelines and regulations) and national legislations on AECS.
5. The informal group shall focus on in-board systems for vehicles of categories M<sub>1</sub> and N<sub>1</sub>.
6. The target completion date for the work of the informal group shall be the 109<sup>th</sup> session of GRSG in October 2015. Vehicles of categories N<sub>2</sub>, N<sub>3</sub>, M<sub>2</sub>, and M<sub>3</sub> may be covered in a later stage.
7. The informal group is expected to propose to GRSG a draft text for a UN Regulation on AECS. The adoption process remains under the responsibility of GRSG, WP.29 and AC.1 in line with the rules defined by the 1958 Agreement.

#### B. Rules of Procedure

1. The informal group is a subgroup to GRSG and is open to Contracting Parties, Vehicle Manufacturers and Suppliers, Technical Services, and all participants of GRSG.
2. A Chair and a Secretary will manage the informal group.
  - (a) The chairmanship shall be under the responsibility of the Russian Federation;
  - (b) The secretariat shall be under the responsibility of OICA.
3. The official working language of the informal group will be English.
4. All documents and/or proposals must be submitted to the Secretary of the group in a suitable electronic format in advance of the meeting. The group may refuse to discuss any item or proposal which has not been circulated 10 working days in advance.
5. An agenda and related documents will be made available on the website by the Secretary, in advance of all scheduled meetings.
6. Decisions will be reached by consensus. When consensus cannot be reached, the Chair of the group shall present the different points of view to GRSG. The Chair may seek guidance from GRSG as appropriate.

7. The progress of the informal group will be routinely reported to GRSG, wherever possible, as an informal document and presented by the Chair, the Secretary or their representative(s).
8. All working documents should be distributed in digital format. Meeting documents should be made available to the Secretary for publication on the website of WP.29.

**Annex V****GRSG informal groups**

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<i>Informal group</i>	<i>Chair</i>	<i>Secretary</i>
Camera Monitor Systems (CMS)	Mr. H. Jongenelen (The Netherlands) Tel: +31 79 3458268 Fax: +31 79 3458041 e-mail: hjongenelen@rdw.nl	Mr. K. Schönemann (CLEPA) Tel: +49 7132-156-127 Mobile: +49 171-8263933 e-mail: kai.schoenemann@gentex.de
Plastic glazing (IGPG)	Mr. K. Preusser (Germany) Tel: +49 230 443623 Fax: +49 230 4467544 e-mail: dr.klaus.preusser@schwerte.de	Mr. O. Fontaine (OICA) Tel: +33 1-43590013 Fax: +33 1-45638441 e-mail: ofontaine@oica.net
Accident Emergency Call Systems (AECS)	Mr. D. Zagarin (Russian Federation) Tel: +7 495 9949916 Fax: +7 495 9949940 e-mail: zagarin@autorc.ru	Mr. O. Fontaine (OICA) Tel: +33 1-43590013 Fax: +33 1-45638441 e-mail: ofontaine@oica.net

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