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Sixty-eighth session

Geneva, 7-10 January 2014

Report of the Working Party on Pollution and Energy (GRPE) on its sixty-eighth session (7-10 January 2014)

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I. Attendance

1. The Working Party on Pollution and Energy (GRPE) held its sixty-eighth session from 7 to 10 January 2014, with Mr. Christoph Albus (Germany) as Chair and Mr. Shrikant Marathe (India) as vice-Chair. 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, as amended): Austria; Belgium; Canada; China; France; Germany; Hungary; India; Italy; Japan; Netherlands; Norway; Poland; Republic of Korea (Korea); Russian Federation; South Africa; Spain; Sweden; Switzerland; United Kingdom of Great Britain and Northern Ireland (UK); United States of America (USA). Experts from the European Commission (EC) also participated. Experts from the following non-governmental organizations took part in the session: Association for Emissions Control by Catalyst (AECC); Association of European Manufacturers of Internal Combustion Engines (EUROMOT); European Association of Automobile Suppliers (CLEPA/MEMA/JAPIA); European Garage Equipment Association (EGEA); European Liquefied Petroleum Gas Association (AEGPL); European Tyre and Rim Technical Organization (ETRTO); International Motorcycle Manufacturers Association (IMMA); and International Organization of Motor Vehicle Manufacturers (OICA); Truck and Engine Manufacturers Association (EMA). Upon the special invitation of the Chair, the experts from the following entities also attended: Environmental Industries Commission (EIC); European Tyre & Rubber Manufacturers Association (ETRMA); Technical Committee of Petroleum Additive Manufacturers in Europe (CEFIC-ATC); FEV Group.

II. Adoption of the agenda (agenda item 1)

Documentation: ECE/TRANS/WP.29/GRPE/2014/1, Add.1 and Add.2, informal documents GRPE-68-01-Rev.2, GRPE-68-02 and GRPE-68-05

2. Having welcomed the participants in conjunction with the GRPE Chair and Vice-Chair, the GRPE secretary announced his forthcoming change of duties. The secretary of WP.29 explained the subsequent organizational changes, introducing to GRPE the secretary appointed on a temporary basis for the June 2014 session and informing GRPE that the recruitment process for a new GRPE secretary has started. GRPE acknowledged the excellent support given by the secretary, Mr. Pierpaolo Cazzola during his tenure and wished him all the best in his new assignment.

3. GRPE adopted the agenda (ECE/TRANS/WP.29/GRPE/2014/1, Adds.1 and 2), as consolidated in GRPE-68-02. GRPE also noted GRPE-68-01-Rev.2, on the organization of GRPE informal working group meetings.

4. The informal documents distributed during the GRPE session are listed in Annex I. Annex II contains a list of the informal meetings held in conjunction with the GRPE session. Annex III lists GRPE informal working groups, task forces and subgroups, giving details on their Chairs, secretaries, and the end of their mandates.

5. The secretariat introduced GRPE-68-05, announcing that the next ordinary GRPE session would take place on 2-6 June 2014 and recalling that the deadline for the submission of official working documents is 7 March 2014. The Chairs and secretaries of informal working groups were invited to approach the secretariat to define the calendar of meetings of informal working groups for the June 2014 GRPE session.

III. Report on the last sessions of the World Forum for Harmonization of Vehicle Regulations (WP.29) (agenda item 2)

Documentation: ECE/TRANS/WP.29/1104 and Add.1, ECE/TRANS/WP.29/1106, and informal document GRPE-68-06

6. Introducing GRPE-68-06, the secretariat informed GRPE about items discussed in the 160th and 161st sessions of the World Forum (held in June 2013 and November 2013) (ECE/TRANS/WP.29/1104 and Add.1, ECE/TRANS/WP.29/1106).

7. The reports of the sixty-fifth and sixty-sixth GRPE sessions were approved by WP.29. All documents transmitted by GRPE, including in particular the two new UN Regulations on Retrofit Emission Control (REC) and on the recyclability of motor vehicles, were adopted by the World Forum.

8. AC.3 agreed with the proposal by the EC and Japan to start working on the development of the first amendment to the WLTP UN GTR (as defined in ECE/TRANS/WP.29/2014/27, filed for consideration and possible adoption by WP.29 in March 2014, jointly with ECE/TRANS/WP.29/2014/28, the final report on this activity). The formal endorsement of ECE/TRANS/WP.29/2014/30, containing detailed information on the organization of the WLTP informal working group and a proposal for the extension of its mandate until the November 2016 is scheduled for the March 2014 session of WP.29.

9. AC.3 endorsed ECE/TRANS/WP.29/2013/127, a proposal by the EC to develop amendments to UN GTR No. 2, eventually contemplating the possibility to develop new UN GTRs and UN Regulations. The results and the final report on this activity are expected in 2016.

10. Following the information on the development of the activities of the EVE informal working group, WP.29 agreed with the proposed schedule of the circulation of the EVE regulatory reference guide (draft in the current GRPE session, official document for the June 2014 session of GRPE, and consideration by WP.29 in November 2014). In order to define how to address future regulatory aspects that have implications for both the WLTP and EVE informal working groups, the World Forum also recommended setting up a coordination meeting between the Chairs and secretaries of the two informal working groups.

11. WP.29 agreed to extend the VPSD informal working group mandate to June 2014.

12. The World Forum endorsed WP.29-160-19-Rev.1 as contribution of the Transport Division to the UNECE position on the issue of diesel exhaust emissions. Following the submission of informal documents by the Russian Federation, WP.29 also agreed with the GRPE decision to assign the follow-up of the issues concerning the emissions of particles from tyre and brake wear to the PMP informal working group.

13. Following the presentation by the Republic of Korea of a proposal to consider regulatory actions on VIAQ and the subsequent discussion, WP.29 agreed that it is necessary to collect more information on the subject and analyse it further before deciding upon the eventual development a UN GTR.

IV. Light vehicles (agenda item 3)

A. Worldwide harmonized Light vehicles Test Procedure (WLTP)

Documentation: ECE/TRANS/WP.29/2014/27, ECE/TRANS/WP.29/2014/28,
ECE/TRANS/WP.29/2014/30,
informal documents GRPE-68-03, GRPE-68-04 and GRPE-68-15

14. The GRPE Chair recalled that the WLTP UN GTR (ECE/TRANS/WP.29/2014/27) is scheduled to be considered by WP.29 in March 2014, jointly with the technical report on this activity (ECE/TRANS/WP.29/2014/28). He noted that the technical report is referencing the detailed reports on the activities of the WLTP subgroups on the Development of the Harmonized Cycle (DHC) and the Development of the Test Procedure (DTP) (GRPE-68-03 and GRPE-68-04). GRPE endorsed GRPE-68-03 and GRPE-68-04.

15. Speaking on behalf of the co-sponsors, the EC and Japan, the expert from the EC presented ECE/TRANS/WP.29/2014/30, containing a proposal to extend the mandate of the WLTP informal working group until November 2016 to develop a first amendment to the WLTP UN GTR. He outlined an indicative road map defining the development of these activities and explained that it foresees a longer period of work with respect to WP.29-161-14 and GRPE-67-06, respectively circulated at the November sessions of WP.29 and GRPE. GRPE endorsed ECE/TRANS/WP.29/2014/30.

16. The Chair of the WLTP introduced the status report of the group (GRPE-68-15). He explained that the Chair and the Drafting Coordinator are experts from the European Union, the Vice-Chair and a Technical Secretary are experts from Japan, and a second Technical Secretary representing OICA. He explained that the group is currently structured as a subgroup on E-Lab and task forces addressing emerging open issues. Having outlined parallel activities being carried out in the EU, he invited Contracting Parties to provide feedback on these subjects by mid-February 2014, in order to update the list of issues that need to be addressed by the WLTP group. He concluded informing GRPE about the next meetings of the group and requested the secretariat to reserve a room for a meeting to be held during the June 2014 GRPE session.

B. Mobile Air-Conditioning Test Procedure (MACTP)

17. The Chair of the informal group on MACTP reported that the MACTP group did not meet before the GRPE proper session, explaining that the meeting originally planned did not take place because of delays in the development of this work. GRPE acknowledged the status of these activities.

C. UN Regulations Nos. 68 (measurement of the maximum speed, including electric vehicles), 83 (emissions of M₁ and N₁ vehicles), 101 (CO₂ emissions/fuel consumption) and 103 (replacement pollution control devices)

Documentation: ECE/TRANS/WP.29/GRPE/2014/2,
ECE/TRANS/WP.29/GRPE/2014/3,
ECE/TRANS/WP.29/GRPE/2014/5,
ECE/TRANS/WP.29/GRPE/2014/7,
ECE/TRANS/WP.29/GRPE/2014/8,
ECE/TRANS/WP.29/GRPE/2014/9,
informal documents GRPE-68-07-Rev.1, GRPE-68-08 and GRPE-68-18

18. The expert from the EC introduced ECE/TRANS/WP.29/GRPE/2014/2 and a corrigendum contained in GRPE-68-08, outlining a proposal to amend UN Regulation No. 83 in order to align its requirements with those of the European Union Regulation (EC) Nos. 715/2007, 692/2008, 566/2011, 459/2012 and 630/2012.

19. The expert from Germany stressed the need to combine safety-related provisions on H2NG flex fuel vehicles with the provisions included in the proposal. The expert from France supported this statement. She underlined that, while Europe has a whole vehicle type approval procedure in place and capable to ensure that the safety issues are also taken into consideration, this is not the case in Contracting Parties that are not subject to the European homologation procedure.

20. The expert from OICA introduced GRPE-68-07-Rev.1, proposing to modify ECE/TRANS/WP.29/GRPE/2014/2 in order to avoid misinterpretations in the practical implementation of the UN Regulation. GRPE-68-07-Rev.1 contains modifications regarding the inclusion of: i) pure electric vehicles and hydrogen fuel cell vehicles in the table on the application of test requirements for type approval and extensions; ii) requirements of UN Regulation No. 85 in UN Regulation No. 83; iii) aspects related with real driving conditions (currently being discussed in the EU); iv) a limit of validity of type-approvals clause and v) the concept of H2NG flex fuel vehicles. It also addresses the requirements for daytime running lamps and for vehicles equipped with compression-ignition engines. The expert from OICA underlined that GRPE-68-07-Rev.1 addresses the concerns on H2NG flex fuel vehicles raised by the experts from Germany and France.

21. The expert from Japan supported GRPE-68-07-Rev.1. The expert from the EC agreed to remove the references to the hydrogen and natural gas (H2NG) fuel from ECE/TRANS/WP.29/GRPE/2014/2. The expert from Italy agreed with this solution, but he also underlined the need to consider H2NG in future developments of UN Regulation No. 83 and other regulatory texts. Following a comment by the expert from the United Kingdom, a reference to vehicles required to be equipped with daytime running lamps, originally included in the OICA proposal (amending section 3.2.7. of Annex 4a), was removed from GRPE-68-07-Rev.1.

22. GRPE adopted ECE/TRANS/WP.29/GRPE/2014/2, as amended by GRPE-68-08 and GRPE-68-07-Rev.1 (without the amendment of section 3.2.7. of Annex 4a), requesting the secretariat to combine these modifications and submit the resulting text to WP.29 and AC.1 for consideration at their June 2014 sessions as the 07 series of amendments to UN Regulation No. 83.

23. The expert from OICA introduced ECE/TRANS/WP.29/GRPE/2014/9, updating the On-Board Diagnostics (OBD) requirements in ECE/TRANS/WP.29/GRPE/2014/2 (07 series of amendments to UN Regulation No. 83). He also explained that ECE/TRANS/WP.29/GRPE/2014/8 contains similar changes for the 06 series of amendments. The expert from CLEPA mentioned that the consequences of these proposals are currently being scrutinized. The expert from the EC expressed the need to analyse the proposals in further detail, also stating that the position of all stakeholders affected by these modifications needs to be taken into account. The expert from Germany also expressed concerns on the content of the proposals. The expert from OICA sought the GRPE advice for their future consideration. GRPE endorsed the invitation by the expert from the EC to consider ECE/TRANS/WP.29/GRPE/2014/8 and ECE/TRANS/WP.29/GRPE/2014/9 in an expert meeting with interested stakeholders with the aim to find a compromise. GRPE also requested the expert from the EC to provide information on the development of this discussion in the June 2014 session of GRPE.

24. The expert from OICA introduced ECE/TRANS/WP.29/GRPE/2014/3, a proposal to amend the 06 series of amendments to UN Regulation No. 83 in order to align the emission

requirements for "social needs" vehicles (currently based on M vehicles) with those enforced in the EU (also contemplating N₁, class 3 limits), also clarifying the need to amend the footnote to the table with emission limits. Introducing ECE/TRANS/WP.29/GRPE/2014/7, he also outlined a proposal for complementary modifications to the 06 series of amendments of UN Regulation No. 83 to clarify its compatibility with the scope of UN Regulation No. 49.

25. GRPE adopted ECE/TRANS/WP.29/GRPE/2014/3, amended as follows:

Page 2, Table 1, the text of note 2, amend "special social needs" to read "specific social needs".

GRPE also adopted ECE/TRANS/WP.29/GRPE/2014/7, not amended. GRPE requested the secretariat to combine the modifications adopted to a single proposal and to submit the resulting text to WP.29 and AC.1 for consideration at their June 2014 session as Supplement 4 to the 06 series of amendments to UN Regulation No. 83. Following the consideration by expert from the Netherlands on the need to exclude vehicles with specific social needs from the 07 series of amendments to UN Regulation No. 83, GRPE invited the EC, the Netherlands and OICA to consider the submission of a proposal for an amendment addressing this aspect in the June 2014 session of GRPE.

26. The expert from the EC introduced ECE/TRANS/WP.29/GRPE/2014/5, a proposal to align the requirements of UN Regulation No. 101 with the latest changes in the regulatory framework of the European Union in relation to the specifications of new reference fuels E10 and B7, explaining that this is related with the provisions of ECE/TRANS/WP.29/GRPE/2014/2.

27. GRPE adopted ECE/TRANS/WP.29/GRPE/2014/5, not amended, and requested the secretariat to submit it to WP.29 and AC.1 for consideration at their June 2014 sessions as Supplement 4 to the 01 series of amendments to UN Regulation No. 101.

28. The expert from Germany introduced GRPE-68-18, illustrating recent findings on the emission performance of approved replacement pollution control devices. He showed that the performance of the devices currently available on the market can vary to a high extent and sought guidance from GRPE on the preparation of a proposal to amend UN Regulation No. 103.

29. The experts from the EC, France, the Netherlands, Spain, Sweden and Switzerland welcomed the contribution from Germany, agreeing that this subject requires further investigation. The experts from France and Spain also underlined some difficulties in the applications of UN Regulation No. 103. GRPE agreed with the initiative announced by the expert from Germany to submit a proposal for the setup of an informal working group tackling this issue in the June 2014 GRPE session.

V. Heavy duty vehicles (agenda item 4)

A. Heavy Duty Hybrids (HDH)

Documentation: Informal documents GRPE-68-12 and GRPE-68-14

30. The Chair and the secretary of the HDH group introduced GRPE-68-14 on the HDH work progress. The HDH Chair summarized the fifteenth and sixteenth group meetings. Having explained the status of validation test programmes, he announced that the validation expected to be completed by the end of March 2014. Following an overview of the remaining open issues, having confirmed that the official submission of the text amending UN GTR No. 4 is expected for June 2014 session of GRPE and having expressed his

confidence about the possibility to meet this deadline, he announced that there is a risk of not being able to do so if the validation fails, or if the open issues not solved to the satisfaction of the group. In this case, an extension of the HDH informal working group mandate will be requested at the June 2014 GRPE session.

31. He focused on the draft amendment to UN GTR No. 4 (GRPE-68-12) by providing details on the definitions, the concept of hybrid powertrain family, the approach considered, the content of Annex 8 (hardware in the loop simulation method) and 9 (powertrains method), as well as amendments aligning UN GTR No. 4 with UN GTR No. 11. The endorsement of GRPE was needed on this last point, since this is beyond the original HDH mandate.

32. He announced that, contrary to what was announced in earlier GRPE sessions, the technical report could not be finalized and submitted at the current GRPE session because the work programme would not be completed by March 2014. He suggested that it will be submitted as informal document to the next GRPE session and concluded by asking the secretariat to reserve a room for half a day for the HDH meeting to be held in conjunction with the June 2014 GRPE session.

33. The expert from OICA emphasized the importance to clarify before the end of January 2014 whether the system work or the engine work should be considered for the development of the regulatory text. GRPE endorsed the proposal by the expert from Sweden to set up a meeting of interested stakeholders in the EC framework to solve this issue.

34. GRPE endorsed the proposal of the HDH Chair to widen the mandate of the group to include amendments aligning UN GTR No. 4 with UN GTR No. 11. GRPE requested the sponsor (EU) to submit an informal document illustrating the choice to widen the mandate to the March 2014 session of WP.29 and AC.3, amending document ECE/TRANS/WP.29/AC.3/29.

B. Retrofit Emissions Control devices (REC)

Documentation: ECE/TRANS/WP.29/GRPE/2014/4,
informal document GRPE-68-17-Rev.2

35. The Chair of the REC group illustrated ECE/TRANS/WP.29/GRPE/2014/4, as updated by GRPE-68-17-Rev.2, containing a proposal for the 01 series of amendments to the UN Regulation on REC. This includes a revision in the definitions of the REC devices, stricter limit values (reduction levels) for REC systems, transitional provisions for the type approval of REC systems that meet the requirements of the REC Regulation in its original form, as well as a revision of the test sequence for particulate reduction and the equivalence matrix for the UN Regulation No. 49 standard series.

36. GRPE adopted ECE/TRANS/WP.29/GRPE/2014/4, as amended in the informal document GRPE-68-17-Rev.2, and requested the secretariat to submit the resulting proposal to WP.29 and AC.1, for consideration at their June 2014 sessions as the 01 series of amendments to the UN Regulation on REC.

C. UN Regulation No. 49 (emissions of compression ignition and positive ignition (LPG and CNG) engines)

Documentation: ECE/TRANS/WP.29/GRPE/2014/6

37. The expert from OICA introduced ECE/TRANS/WP.29/GRPE/2014/6, a proposal aiming to align the scope of the 05 series of amendments to UN Regulation No. 49 with that of the 06 series.

38. GRPE adopted ECE/TRANS/WP.29/GRPE/2014/6, not amended, and requested the secretariat to submit it to WP.29 and AC.1, for consideration at their June 2014 sessions as Supplement 7 to the 05 series of amendments to Regulation No. 49.

D. UN Global Technical Regulations (GTRs) Nos. 4 (World-wide harmonized Heavy duty Certification procedure (WHDC)), 5 (World-Wide harmonized Heavy duty On-Board Diagnostic systems (WWH-OBD)) and 10 (Off-Cycle Emissions (OCE))

39. GRPE did not receive any new proposal to amend UN GTRs Nos. 4, 5 and 10.

VI. UN Regulations Nos. 85 (measurement of the net power and the 30 min. power) and 115 (LPG and CNG retrofit systems) (agenda item 5)

40. GRPE did not receive any new proposal to amend UN Regulations No. 85 and 115.

VII. Agricultural and forestry tractors, non-road mobile machinery (agenda item 6)

A. UN Regulations Nos. 96 (diesel emission (agricultural tractors)) and 120 (net power of tractors and non-road mobile machinery)

Documentation: Informal document GRPE-68-09

41. The expert from EUROMOT introduced GRPE-68-09, containing a proposal to amend UN Regulation No. 96. This aims to allow the engine manufacturers to obtain approvals, even in Contracting Parties that apply more recent series of amendments, for engines that need to be marketed in Contracting Parties applying previous series of amendments. He clarified that this is in line with the provisions of UN Regulation No. 49.

42. The experts from Italy and the United Kingdom supported the proposal.

43. GRPE requested the secretariat to distribute GRPE-68-09 as an official document for consideration at the GRPE session of June 2014.

B. UN GTR No. 11 (engines)

44. There were no proposals to amend UN Global Technical Regulation No. 11.

VIII. Particle Measurement Programme (PMP) (agenda item 7)

Documentation: Informal documents GRPE-68-10, GRPE-68-20 and GRPE-68-21

45. The Chair of the PMP provided an overview of the latest activities of the informal working group, focusing primarily on emissions of sub 23 nm particles and particles from tyre and brake wear. He focused first on sub 23 nm particles (GRPE-68-21), reporting that the PMP informal working group does not see an urgent need to revise the current measurement cut-off size of 23 nm. He mentioned that the literature review on the emission of particles from tyre and brake wear (GRPE-68-22) has been completed. He cautioned

about the numerous measurement techniques, the important differences between light and heavy duty vehicles, the importance of driving conditions and the lack of a clear definition of non-exhaust emissions. Overall, he reported that exhaust and non-exhaust sources are estimated to contribute almost equally to total traffic-related PM₁₀ emissions. The relative contribution of non-exhaust sources is expected to increase in the coming years due to the tendency of decreasing exhaust emissions. He provided information on the mass and number size distributions, the chemical characterization of particles from tyre and brake wear, providing estimations of the emission factors applicable to them. He underlined that brake particles are always linked to the vehicles, while particles from tyre wear result from the interaction of the vehicle and the road. Having mentioned current research activities being carried out by the industry, he concluded that knowledge at present is not sufficient in these areas and several open questions remain. He warned that, should the PMP meeting keep working on tyre and brake wear, it will be necessary to revise the mandate of the informal working group, since this is currently limited to the literature work presented at this GRPE session.

46. Having recalled the submission of GRPE-65-20, WP.29-160.39 and WP.29-161-22 on tyre and brake wear and vehicle indoor air quality, the expert from the Russian Federation introduced GRPE-68-10. He argued that the estimates about tyre and brake wear presented in it are significantly higher than the limits set by the Euro 6 pollutant emission regulations. He underlined that the importance of tyre and brake wear estimated in it is significantly higher than earlier estimates on the subject. He provided insights on the impact of the estimations of the contents of particulate matter within vehicles and in the outdoor air in urban driving conditions, and concluded that increased attention to the equipment of vehicles with instruments improving the indoor air quality needs to be taken into consideration.

47. GRPE acknowledged the information provided by the PMP informal working group and the Russian Federation and requested the PMP group to propose in the June 2014 session of GRPE a possible roadmap on how to proceed further with the issue of particles from tyre and brake wear.

IX. Gaseous Fuelled Vehicles (GFV) (agenda item 8)

Documentation: Informal document GRPE-68-23

48. The Chair of the informal working group on GFV reported on the work progress made by the group (GRPE-68-23), mentioning the recent meetings that led to the adoption of GFV-related texts in 2013 by WP.29. He recalled the decision to develop a new UN Regulation for heavy duty dual fuel retrofit, providing information on the recent development of this task and reporting that an informal document on the subject is expected for the June 2014 GRPE session. Official consideration by GRPE is currently scheduled for January 2015, and WP.29 consideration for June 2015. A task force for the retrofit of heavy duty dual fuel has already been established. Issues recently discussed include the scope of the text, the concept of families, aspects related with the need for the type approval of retrofitted dual fuel engines. The question of using the retrofit notations with or without the presence of substantial modification to the emission strategies of heavy duty engines has been discussed in detail. An agreement to maintain the retrofit wording also for modifications with substantial effects on emission strategies has been reached with OICA. Future activities will focus on the consideration of fundamental principles, the liability of original equipment manufacturers after the engine conversion, and the research of solutions to address other open issues. The GFV Chair concluded by requesting the secretariat to reserve a room for a brief meeting during the June 2014 GRPE session.

49. GRPE acknowledged the progress made by the group.

X. Motorcycles and mopeds (agenda item 9)

A. Environmental and Propulsion Performance Requirements (EPPR) for L-category vehicles

Documentation: Informal document GRPE-68-24

50. Introducing GRPE-68-24, the Chair of the EPPR informal working group informed GRPE about recent meetings. He listed the topics that need to be addressed by the informal working group, clarifying that the initial focus of the work on two wheelers and that the evaporative emissions test and on-board diagnostics environmental verification tests are the current priorities. He reported that a draft text addressing evaporative emissions is expected to be ready in April 2014. On OBD, he reported that, even if a draft text is expected by April 2014, the complexity of this subject may lead to the postponement of some of the aspects to a later stage. He concluded by outlining the schedule of future meetings and requested the secretariat to reserve a room for a brief meeting during the June 2014 GRPE session.

51. The expert from IMMA expressed his support for the choices made on the prioritization of the group. The expert from Italy also expressed his appreciation for the choice to focus initially on two wheelers.

52. GRPE acknowledged the progress of the group.

B. UN Regulations Nos. 40 (emission of gaseous pollutants by motor cycles) and 47 (emission of gaseous pollutants of mopeds)

53. GRPE did not receive any new proposal to amend UN Regulations Nos. 40 and 47.

C. UN GTR No. 2 (World-wide Motorcycle emissions Test Cycle (WMTC))

54. GRPE did not receive any new proposal to amend UN GTR No. 2.

XI. Electric Vehicles and the Environment (EVE) (agenda item 10)

Documentation: Informal documents GRPE-68-13 and GRPE-68-22

55. The secretary of the informal group on EVE introduced GRPE-68-22, reporting on recent meetings and providing information on the draft regulatory reference guide (GRPE-68-13). He focused on the recommendations that are contained in the guide, explaining that they concern the vehicle range and energy consumption testing, the method of calculation for energy consumption and CO₂ emissions (including the impact of upstream losses), battery performance and durability, battery recycling. He acknowledged that the recommendation on the method estimating upstream energy use and CO₂ emissions is currently the most controversial subject. Reporting on the meeting between EVE and WLTP leadership groups, he mentioned that the expert from the EC offered to suggest solution aiming to ensure that the EVE and the WLTP activities will not lead to the duplication of work. He concluded by

summarizing the schedule of forthcoming meetings and requested the secretariat to reserve a room for a meeting during the June 2014 GRPE session.

56. The Chair of GRPE suggested some alternatives concerning the development of the regulatory work with an impact for electric vehicles: i) maintaining the existing structure, with two informal working groups: ii) combine the WLTP and EVE groups; or iii) restructure the reporting hierarchy of the groups, with the EVE reporting to WLTP for issues related with the WLTP UN GTR and to GRPE directly for all other issues. He considered also that future regulatory instruments may need to be developed under the current WLTP regulatory framework or as part of other UN Regulations and UN GTRs.

57. Having expressed concerns about the controversies regarding the method of stating upstream energy use and CO₂ emissions, the Chair of GRPE invited Contracting Parties to seek an agreement on this topic. He recalled that, should these controversies remain unsolved at the EVE and GRPE levels, they will need to be considered by WP.29 and AC.3.

XII. Vehicle Propulsion System Definitions (VPSD) (agenda item 11)

Documentation: Informal document GRPE-68-19

58. The secretary of the VPSD informal working group introduced GRPE-68-19, on the work progress, and informed GRPE about current open issues and discussion items. She clarified that the informal working group agreed on the development schedule for the framework system of definitions of vehicles, powertrains, energy converters and energy storage systems to be introduced as annexes to R.E.3 and S.R.1. A draft is expected to be circulated in the June 2014 session of GRPE. An official document shall be submitted in January 2015, and WP.29 consideration is foreseen for June 2015.

59. GRPE acknowledged the progress made by the group and agreed to submit to WP.29 the request for an extension of its mandate to June 2015.

XIII. Fuel Quality (FQ) (agenda item 12)

Documentation: Informal document GRPE-68-16-Rev.1

60. On behalf of AECC, CLEPA, EUROMOT and OICA, the expert from OICA introduced GRPE-68-16-Rev.1, containing recommendations, for inclusion in the Consolidated Resolution on the Construction of Vehicles (R.E.3) and Special Resolution No. 1 concerning the common definitions of vehicle categories, masses and dimensions (S.R.1) on the minimum quality of gasoline and diesel fuels that are expected to be introduced contextually with increasingly stringent limits of motor vehicle and non-road mobile machinery pollutant emissions. He recalled that the recommendations includes several annexes on the emission levels allowed by different series of amendments to UN Regulations, the correspondence with European emission standards, and the explanation of the importance of the parameters introduced in the recommendations with respect to pollutant emission reduction strategies. He concluded by expressing the willingness of AECC, CLEPA, EUROMOT and OICA to discuss the recommendation with other stakeholders.

61. The expert from Italy expressed his support for this proposal and requested to maintain the subject on the GRPE agenda. The expert from the USA expressed his support for the consideration of vehicles and fuels as a system when looking at strategies for the reduction of pollutant emissions. Both the experts from Italy and the USA expressed the need to involve other stakeholders in the discussion.

62. GRPE invited all stakeholders to contribute to assure progress on this topic. The expert from OICA welcomed this decision. GRPE also welcomed the proposal of the expert from Sweden to present the activities of the Climate and Clean Air Coalition (CCAC), a global effort to treat short-lived climate pollutants such as black carbon, methane and many hydrofluorocarbons to protect human health and the environment in the next GRPE session.

XIV. International Whole Vehicle Type Approval (IWVTA) (agenda item 13)

63. The GRPE Chair and the IWVTA Ambassador reported on the IWVTA development process, explaining that the objective to extend the mutual recognition of vehicle systems and components to whole vehicles could not be achieved in a single step. UN Regulation No. 0 will therefore allow, in a first step, a partial IWVTA, limited to M₁ category of vehicles and requiring completion by national or regional approvals. The possibility of a complete whole vehicle approval is foreseen for a later stage. The structure of UN Regulation No. 0 includes two tentative lists with UN Regulations that would need to be complied with for obtaining a Whole Vehicle Type Approval: thirty-nine UN Regulations could already be included in the first step of the partial IWVTA (list A), while fourteen UN Regulations (list B) need amendment before their inclusion into list A. The GRPE Chair clarified that no action is needed from GRPE at the moment. Future action needs for GRPE shall be monitored and reported to GRPE by the GRPE Chair and IWVTA Ambassador.

XV. Recyclability (agenda item 14)

Documentation: ECE/TRANS/WP.29/2013/125

64. As mentioned by the secretariat under agenda item 2, the new UN Regulations on the recyclability of motor vehicles (ECE/TRANS/WP.29/2013/125) was adopted by the World Forum in its November 2013 session. GRPE agreed to remove this item from the agenda of its next session, including the discussion of proposals for the amendment to this new UN Regulation under the agenda item dealing with UN Regulations Nos. 85 and 115.

XVI. Vehicles Indoor Air Quality (VIAQ) (agenda item 15)

Documentation: GRPE-68-11

65. Having recalled the WP.29 decision to seek more information on VIAQ before taking decisions upon the development of a UN GTR on the subject (as reported under agenda item 2), the GRPE Chair announced that the VIAQ expert from Korea wished to share a presentation on the subject (GRPE-68-11). Unfortunately, he could not attend this session. GRPE agreed to postpone the introduction of GRPE-68-11 to its next session, in June 2014, maintaining this item on the agenda.

XVII. 1997 Agreement (periodical technical inspections): UN Rule No. 1 (environment protection) (agenda item 16)

66. GRPE did not receive any new proposal to consider amendments to UN Rule No. 1.

XVIII. Exchange of information on emission requirements (agenda item 17)

A. European heavy duty CO₂ emission policy

67. Providing an update on the European policy concerning CO₂ emissions from heavy duty vehicles, the expert from the EC provided information of the development of a methodology for the assessment of the fuel-, energy consumption and CO₂ emissions of Heavy Duty Vehicles (HDVs). Its core component is the VECTO tool, currently existing as a prototype. The tool allows for the simulation of HDV CO₂ emissions using a number of technical component specific and vehicle specific parameters (engine, other drive train components, superstructure, and auxiliaries) over several standard test cycles, which are specific for the use of the vehicle (i.e. mission profile specific cycles such as city delivery cycle, long haul delivery cycle and others). The new simulation tool will be made available to the public as an element for their purchase decision to allow operators to simulate the fuel consumption and CO₂ emission performance of different HDVs for their individual purpose. Further regulatory actions will be considered at a later stage, notably the introduction of CO₂ emission limits (as for light vehicles) or possibly other options such as the possible inclusion of road transport emissions in the EU Emission Trading System. The development of UN Regulations or UN GTRs addressing CO₂ emissions from HDV is not foreseen at the moment.

68. The expert from OICA underlined the difficulty to link the energy consumption and CO₂ emission performances, the usage profiles of vehicles and type approval requirements. The expert from the EC clarified that legislative instruments to associate the use of the VECTO tool for the emissions with type approval process is currently on-going. A proof of concept study was performed by the EC in collaboration with Original Equipment Manufacturers (OEMs) in order to demonstrate the plausibility of this certification approach, the effectiveness of the experimental procedures introduced and the accuracy of the model. Results were very promising with simulated CO₂ being within $\pm 3.5\%$ of measured values over several different operating conditions. Nevertheless, should the VECTO's specific mission profile cycles be considered inappropriate for type approval certification, he reported that it is also possible to test the HDV on the road, using a pre-determined test cycle. A proposal is expected over the course of 2014.

B. Other exchanges

69. GRPE agreed that the introduction of the CCAC activities, suggested following the discussion of the agenda item on fuel quality, shall be considered under this agenda item in the next GRPE session.

XIX. Other business (agenda item 18)

A. Tributes

70. Speaking on behalf of GRPE, the Chair GRPE paid a tribute to Mr. Aldo Bassi and Mr. Stanislaw Radzimirski, who passed away in 2013, acknowledging their considerable contributions to the activities of the group.

B. Other business

71. There were no proposals to discuss other business.

XX. Provisional agenda for the next session**A. Next GRPE session**

72. The next GRPE session is scheduled to be held in Geneva, Palais des Nations, starting on Monday, 2 June 2014, at 2.30 p.m. until Friday, 6 June 2014, at 12.30 p.m., subject to confirmation by the secretariat (see GRPE-69-01).

B. Provisional agenda for the next GRPE session proper

73. The next GRPE proper session is scheduled to be held on Thursday, 5 June 2014, from 9.30 a.m. until Friday, 6 June 2014, at 12.30 p.m.:

1. Adoption of the agenda.
2. Report of the last session of the World Forum for Harmonization of Vehicle Regulations (WP.29).
3. Light vehicles:
 - (a) Worldwide harmonized Light vehicles Test Procedure (WLTP);
 - (b) Mobile Air-Conditioning Test Procedure (MACTP);
 - (c) UN Regulations Nos. 68 (measurement of the maximum speed, including electric vehicles), 83 (emissions of M₁ and N₁ vehicles), 101 (CO₂ emissions/fuel consumption) and 103 (replacement pollution control devices);
 - (d) UN Global Technical Regulation (GTR) on the Worldwide harmonized Light vehicles Test Procedure (WLTP).
4. Heavy duty vehicles:
 - (a) Heavy Duty Hybrids (HDH);
 - (b) UN Regulation No. 49 (emissions of compression ignition and positive ignition (LPG and CNG) engines) and UN Regulation on Retrofit Emissions Control devices (REC);
 - (c) UN Global Technical Regulations (GTRs) Nos. 4 (World-wide harmonized Heavy duty Certification procedure (WHDC)), 5 (World-Wide harmonized Heavy duty On-Board Diagnostic systems (WWH-OBD)) and 10 (Off-Cycle Emissions (OCE)).
5. UN Regulations Nos. 85 (measurement of the net power and the 30 min. power), 115 (LPG and CNG retrofit systems) and UN Regulation on the recyclability of motor vehicles.
6. Agricultural and forestry tractors, non-road mobile machinery:
 - (a) UN Regulations Nos. 96 (diesel emission (agricultural tractors)) and 120 (net power of tractors and non-road mobile machinery);
 - (b) UN GTR No. 11 (engines).

7. Particle Measurement Programme (PMP).
8. Gaseous Fuelled Vehicles (GFV).
9. Motorcycles and mopeds:
 - (a) Environmental and Propulsion Performance Requirements (EPPR) for L-category vehicles;
 - (b) UN Regulations Nos. 40 (emission of gaseous pollutants by motor cycles) and 47 (emission of gaseous pollutants of mopeds);
 - (c) UN GTR No. 2 (World-wide Motorcycle emissions Test Cycle (WMTC)).
10. Electric Vehicles and the Environment (EVE).
11. Vehicle Propulsion System Definitions (VPSD).
12. Fuel Quality (FQ).
13. International Whole Vehicle Type Approval (IWVTA).
14. Vehicles Indoor Air Quality (VIAQ).
15. 1997 Agreement (periodical technical inspections): UN Rule No. 1 (environment protection).
16. Exchange of information on emission requirements.
 - (a) Climate and Clean Air Coalition (CCAC) activities.
 - (b) Other exchanges.
17. Other business.

C. Informal meetings in conjunction with the next GRPE session

74. The informal meetings in conjunction with the next GRPE session proper will be held according to the following table:

<i>Date</i>	<i>Time</i>	<i>Group</i>
2 June 2014	2:30 p.m. - 5:30 p.m.	Electric Vehicles and the Environment (EVE)
3 June 2014	9:30 a.m. - 12:30 p.m.	Heavy Duty Hybrids (HDH)
	2:00 p.m. - 4:00 p.m.	Gaseous Fuelled Vehicles (GFV)
	4:00 p.m. - 6:00 p.m.	Particle Measurement Programme (PMP)
4 June 2014	9:00 a.m. - 1:00 p.m.	Worldwide harmonized Light vehicles Test Procedure (WLTP)
	2:30 p.m. - 5:30 p.m.	Environmental and Propulsion Performance Requirements of L-category vehicles (EPPR)

75. The agendas of these meetings will be prepared by the respective secretaries and distributed to the members of each group prior to each meeting. All these meetings will be held without interpretation.

Annex I

List of informal documents distributed without an official symbol

<i>GRPE-68-</i>	<i>Transmitted by</i>	<i>Agenda item</i>	<i>Language</i>	<i>Title</i>	<i>Follow-up</i>
01- Rev.2	Secretariat	1	E	Informal meetings in conjunction with the GRPE session proper: room reservations and schedule	(a)
2	Secretariat	1	E	Updated agenda	(a)
3	WLTP	3(a)	E	Technical report on the Development of the Harmonized driving Cycle (DHC)	(a)
4	WLTP	3(a)	E	Technical report on the Development the Test Procedure (DTP)	(a)
5	Secretariat	1	E	General information on the current and next GRPE sessions	(a)
6	Secretariat	2	E	Report on the last sessions of WP.29: June 2013 (160th WP.29) and November 2013 (161st WP.29)	(a)
07- Rev.1	OICA	3(c)	E	Comments to the draft 07 series of amendments to Regulation No. 83 (ECE/TRANS/WP.29/GRPE/2014/2)	(b)
8	European Commission	3(c)	E	Proposal for corrigendum to revision 4, 07 series of amendments to Regulation No. 83 (ECE/TRANS/WP.29/GRPE/2014/2)	(b)
9	EUROMOT	6(a)	E	Proposal to amend the 04 series of amendments to UN Regulation No. 96	(c)
10	Russian Federation	7	E	On dispersion of solid particles into the atmospheric air of cities, caused by tire and road surface wear	(a)
11	Republic of Korea	15	E	Information of Korea cases on Vehicle Indoor Air Quality (VIAQ)	(d)
12	HDH	4(a)	E	Proposal for draft Amendment 3 to global technical regulation (gtr) No. 4: test procedure for compression ignition (C.I.) engines and positive-ignition (P.I.) engines fuelled with natural gas (NG) or liquefied petroleum gas (LPG) with regard to the emission of pollutants	(c)
13	EVE	10	E	Electric Vehicle Regulatory Reference Guide (draft 3)	(c)
14	HDH	4(a)	E	Report to GRPE	(a)
15	WLTP AECC,	3(a)	E	Report to GRPE	(a)
16- Rev.1	CLEPA, EUROMOT and OICA	12	E	Recommendation concerning guidelines for market fuel quality in R.E.3 and/or S.R.1	(d)
17- Rev.2	REC	4(b)	E	Updated proposal for the 01 series of amendments to the UN Regulation on uniform provisions concerning the approval of Retrofit Emission Control devices for heavy duty vehicles	(b)

<i>GRPE-68-</i>	<i>Transmitted by</i>	<i>Agenda item</i>	<i>Language</i>	<i>Title</i>	<i>Follow-up</i>
18	Germany	3(c)	E	Findings on the emission performance of approved replacement pollution control devices and guidance on the preparation of a proposal to amend UN Regulation No. 103	(d)
19	VPSD	11	E	Report to GRPE	(a)
20	PMP	7	E	Particle emissions from tyre and brake wear on-going literature review summary and open questions	(a)
21	PMP	7	E	Sub 23 nm Particles: Key Messages (document discussed in the PMP meeting 08 Jan 2014)	(a)
22	EVE	10	E	Report to GRPE	(a)
23	GFV	8	E	Report to GRPE	(a)
24	EPPR	9(a)	E	Report to GRPE	(a)

Notes:

- (a) Consideration completed or to be superseded
- (b) Adopted and submitted to WP.29
- (c) Resume consideration on the basis of an official document
- (d) Kept as reference document/continue consideration.

Annex II

[English only]

Informal meetings held in conjunction with the GRPE session

<i>Date</i>	<i>Time</i>	<i>Group</i>
7 January 2014	9:30 a.m. - 12:30 p.m.	Heavy Duty Hybrids (HDH)
	10:00 a.m. - 12:00 p.m.	Vehicle Propulsion System Definitions (VPSD)
	2:30 p.m. - 5:30 p.m.	Gaseous Fuelled Vehicles (GFV)
	2:30 p.m. - 5:30 p.m.	Electric Vehicles and the Environment (EVE)
8 January 2014	11:00 a.m. - 12:30 p.m.	Retrofit Emission Control devices (REC)
	9:00 a.m. - 1:00 p.m.	Worldwide harmonized Light vehicles Test Procedure (WLTP)
	2:30 p.m. - 5:30 p.m.	Particle Measurement Programme (PMP)
	2:30 p.m. - 5:30 p.m.	Environmental and Propulsion Performance Requirements of L-category vehicles (EPPR)

Annex III

[English only]

List of GRPE informal working groups, task forces and subgroups

<i>Name (Acronym) (Status)</i>	<i>Chair or Co-chairs</i>	<i>Secretaries</i>	<i>End of mandate</i>
Environmental and Propulsion Performance Requirements of L-category vehicles (EPPR) (group)	Petter Åsman, petter.asman@trafikverket.se	Thomas Vercammen, t.vercammen@acem.eu	June 2016
Electric Vehicles and the Environment (EVE) (group)	Michael Olechiw, Olechiw.Michael@epamail.epa.gov Chen Chunmei (vice-Chair), chencm@miit.gov.cn Kazuyuki Narusawa (vice-Chair), narusawa@ntsel.go.jp	Stéphane Couroux, stephane.couroux@ec.gc.ca	November 2014
Heavy Duty Hybrids (HDH) (group)	Petter Åsman, petter.asman@trafikverket.se	Jürgen Stein, hj.stein@daimler.com	June 2014
Gaseous Fuelled Vehicles (GFV) (group)	André Rijnders, arijnders@rdw.nl	Jeffrey Seisler, jseisler@cleanfuelsconsulting.org Salvatore Piccolo, s.piccolo@federchimica.it	June 2014
Heavy Duty Dual-Fuel Task Force (HDDV TF) (task force)	Jean-François Renaudin, jean-francois.renaudin@volvo.com Henk Dekker, henk.j.dekker@tno.nl	Jeffrey Seisler, jseisler@cleanfuelsconsulting.org	June 2014
Liquefied Natural Gas Task Force (LNG TF) (task force)	Paul Dijkhof, Paul.Dijkhof@kiwa.nl	Jeffrey Seisler, jseisler@cleanfuelsconsulting.org Jaime Del Alamo, jaime.alamo@ngvaeurope.eu	June 2014
Mobile Air Conditioning Test Procedure (MACTP) (group)	André Rijnders, arijnders@rdw.nl	Hanns-Peter Bietenbeck, hbietenb@ford.com Caroline Hosier, chosier@ford.com	June 2014
Particle Measurement Programme (PMP) (group)	Giorgio Martini, giorgio.martini@jrc.ec.europa.eu	Caroline Hosier, chosier@ford.com	June 2017
Retrofit Emission Control devices (REC) (group)	Henk Baarbé, henk.baarbe@minienm.nl	Dirk Bosteels, dirk.bosteels@aecc.be	June 2014
Vehicle Propulsion System Definitions (VPSD) (group)	Christoph Albus, christoph.albus@bmvs.bund.de	Daniela Leveratto, dleveratto@oica.net	June 2015 (to be confirmed by WP.29)

<i>Name (Acronym) (Status)</i>	<i>Chair or Co-chairs</i>	<i>Secretaries</i>	<i>End of mandate</i>
Worldwide harmonized Light vehicles Test Procedure (WLTP) (group)	Stephan Redmann, stephan.redmann@bmvbs.bund.de Kazuki Kobayashi (vice-Chair), ka-koba@shinsa.ntsel.go.jp	Noriyuki Ichikawa (co-Technical Secretary), noriyuki_ichikawa@mail.toyota.co.jp Konrad Kolesa (co-Technical Secretary), konrad.kolesa@audi.de	November 2016 (to be confirmed by WP.29)
