Economic Commission for Europe
Inland Transport Committee
World Forum for Harmonization of Vehicle Regulations
Working Party on Pollution and Energy
Seventieth session
Geneva, 13-16 January 2015

Report of the Working Party on Pollution and Energy
(GRPE) on its seventieth session

Contents

<table>
<thead>
<tr>
<th>Paragraphs</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>1-2</td>
</tr>
<tr>
<td>II.</td>
<td>3-5</td>
</tr>
<tr>
<td>III.</td>
<td>6</td>
</tr>
<tr>
<td>IV.</td>
<td>7-20</td>
</tr>
<tr>
<td>A.</td>
<td>7-14</td>
</tr>
<tr>
<td>B.</td>
<td>15-20</td>
</tr>
<tr>
<td>V.</td>
<td>21-23</td>
</tr>
<tr>
<td>A.</td>
<td>21</td>
</tr>
<tr>
<td>B.</td>
<td>22-23</td>
</tr>
<tr>
<td>VI.</td>
<td>24-26</td>
</tr>
<tr>
<td>VII.</td>
<td>27-29</td>
</tr>
</tbody>
</table>
A. Regulations Nos. 96 (Diesel emission (agricultural tractors)) and 120 (Net power of tractors and non-road mobile machinery) .................................................. 28 7

B. GTR No. 11 (Non-road mobile machinery engines) .............................................. 29 7

VIII. Particle Measurement Programme (PMP) (agenda item 7) .............................. 30-31 7

IX. Gaseous Fuelled Vehicles (GFV) (agenda item 8) .............................................. 32-35 7

X. Motorcycles and mopeds (agenda item 9) ............................................................ 36-39 8

A. Environmental and Propulsion Performance Requirements (EPPR) for L-category vehicles................................................................. 36-37 8

B. Regulations Nos. 40 (Emission of gaseous pollutants by motor cycles) and 47 (Emission of gaseous pollutants of mopeds)......................................................... 38 8

C. GTR No. 2 (World-wide Motorcycle emissions Test Cycle (WMTC))................. 39 8

XI. Electric Vehicles and the Environment (EVE) (agenda item 10) ......................... 40-41 8

XII. Vehicle Propulsion System Definitions (VPSD) (agenda item 11) ................... 42-45 9

XIII. Fuel Quality (FQ) (agenda item 12) ................................................................. 46 9

XIV. International Whole Vehicle Type Approval (IWVTA) (agenda item 13)......... 47 9

XV. Vehicles Indoor Air Quality (VIAQ) (agenda item 14) ...................................... 48 9

XVI. 1997 Agreement (periodical technical inspections): Rule No. 1 (Environment protection) (agenda item 15) ................................................................. 49 10

XVII. Exchange of information on emission requirements (agenda item 16) ......... 50 10

XVIII. Other business (agenda item 17) ................................................................. 51-52 10

A. Reference to standards ....................................................................................... 51 10

B. Tributes .............................................................................................................. 52 10

XIX. Provisional agenda for the next session......................................................... 53-56 10

A. Next GRPE session ........................................................................................... 53 10

B. Provisional agenda for the next proper GRPE session .................................... 54 10

C. Informal meetings in conjunction with the next GRPE session ..................... 55-56 12

Annexes

I List of informal documents distributed without an official symbol ...................... 13

II Informal meetings held in conjunction with the GRPE session ............................. 15

III List of GRPE informal working groups, task forces and subgroups ................... 16

IV Amendments to Regulation No. 83 ............................................................... 17

V Amendments to ECE/TRANS/WP.29/GRPE/2015/3 ........................................ 18

VI Terms of reference and rules of procedures of the Informal Working Group on Vehicle Interior Air Quality (VIAQ) ................................................................. 22

VII Amendments to ECE/TRANS/WP.29/GRPE/2015/2 ...................................... 25
I. Attendance and opening statements

1. The Working Party on Pollution and Energy (GRPE) held its seventieth session from 13 to 16 January 2015, with Mr. C. Albus (Germany) as Chair and Mrs. R. Urdhwareshe (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): Belgium; Canada; Czech Republic; China; France; Germany; Hungary; India; Italy; Japan; Netherlands; Poland; Republic of Korea (Korea); Russian Federation; South Africa; Spain; Sweden; Switzerland; United Kingdom of Great Britain and Northern Ireland (UK) as well as the 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 Federation for Transport and Environment (T&E); International Motorcycle Manufacturers Association (IMMA); International Organization of Motor Vehicle Manufacturers (OICA) and International Association for Natural Gas Vehicles (IANGV/NGV Global).

2. The Director of the UNECE Transport Division, Ms. E. Molnar, introduced to the delegates Mr. W. Nissler, Chief of the Vehicle Regulations and Transport Innovations Section. She presented her strategic view on transport in general and announced that, in the context of the Post 2015 negotiations, it was not highlighted as a separate sector but was mentioned in several goals. She announced that the next Inland Transport Committee (ITC) was scheduled to be held on 26-24 February 2015 and invited the delegates to participate. She concluded her statement by reporting on the latest UNECE Publication on sustainable development.

II. Adoption of the agenda (agenda item 1)

Documentation: ECE/TRANS/WP.29/GRPE/2015/1 and Add.1
Informal documents GRPE-70-01-Rev.1, GRPE-70-08-Rev.2 and GRPE-70-10

3. GRPE adopted the agenda prepared for its seventieth session (ECE/TRANS/WP.29/GRPE/2015/1 and Add.1), as updated and consolidated in GRPE-70-08-Rev.2, including the informal documents table for the session. GRPE noted GRPE-70-01-Rev.1, on the organization of GRPE informal working group (IWG) meetings held during the week.

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-70-10, announcing that the next GRPE session would take place on 9-12 June 2015 and recalling that the deadline for the submission of official documents would be 6 March 2015. These dates may be reconfirmed by the secretariat. 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 2015 GRPE session.
III. Report on the last session of the World Forum for Harmonization of Vehicle Regulations (WP.29) (agenda item 2)

Documentation:

ECE/TRANS/WP.29/1110, ECE/TRANS/WP.29/1112
Informal document GRPE-70-11

6. Introducing GRPE-70-11, the secretariat reported on GRPE relevant items discussed during the 163rd and 164th session of the World Forum. For more details, see ECE/TRANS/WP.29/1110 and ECE/TRANS/WP.29/1112.

IV. Light vehicles (agenda item 3)

A. 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/2015/2
ECE/TRANS/WP.29/GRPE/2015/4
ECE/TRANS/WP.29/GRPE/2015/5
ECE/TRANS/WP.29/GRPE/2015/6
ECE/TRANS/WP.29/GRPE/2015/7
ECE/TRANS/WP.29/GRPE/2015/8
Informal documents GRPE-70-04, GRPE-70-05, GRPE-70-14 and GRPE-70-16-Rev.1

7. The expert from EC introduced ECE/TRANS/WP.29/GRPE/2015/2 proposing clarifications of the existing transitional provisions in Regulation No. 83. The expert from OICA introduced an alternative proposal (GRPE-70-16-Rev.1). GRPE adopted ECE/TRANS/WP.29/GRPE/2015/2.

8. GRPE adopted with a scrutiny reservation the proposal contained in GRPE-70-16-Rev.1 and amending ECE/TRANS/WP.29/GRPE/2015/2.

9. The expert from OICA presented (GRPE-70-14) the proposals ECE/TRANS/WP.29/GRPE/2015/4 and ECE/TRANS/WP.29/GRPE/2015/5 amending the On-Board Diagnosis (OBD) requirements in Regulation No. 83. He also presented GRPE-70-04 and GRPE-70-05 introducing editorial corrections in both proposals. GRPE adopted these proposals as amended by Annex IV to this report.

10. GRPE reviewed a proposal tabled by the expert from OICA, updating the reference fuels in the 06 series of amendments to Regulation No. 83. GRPE adopted ECE/TRANS/WP.29/GRPE/2015/6.

11. The expert from the Netherlands introduced ECE/TRANS/WP.29/GRPE/2015/8 proposing the deletion of the “vehicle designed to fulfil specific social needs” definition. GRPE adopted this proposal.

12. GRPE requested the secretariat to submit ECE/TRANS/WP.29/GRPE/2015/4 as amended by Annex IV to this report and ECE/TRANS/WP.29/GRPE/2015/6 to WP.29 and AC.1 for consideration and vote at their June 2015 session as draft Supplement 5 to 06 series of amendments to Regulation No. 83.
13. GRPE requested the secretariat to submit ECE/TRANS/WP.29/GRPE/2015/2 as amended by Annex VII, ECE/TRANS/WP.29/GRPE/2015/5 as amended by Annex IV to the report and ECE/TRANS/WP.29/GRPE/2015/8 to WP.29 and AC.1, for consideration at their June 2015 sessions as draft Supplement 1 to 07 series of amendments to Regulation No. 83.

14. GRPE considered a proposal by OICA aimed at introducing transitional provisions to the prescriptions of Supplement 4 to the 01 series of amendments to Regulation No. 101, to ensure consistency with those of Regulation No. 83. GRPE adopted this proposal ECE/TRANS/WP.29/GRPE/2015/7 and requested the secretariat to submit it to WP.29 and AC.1, for consideration and vote at their June 2015 sessions, as draft Supplement 5 to 01 series of amendments to Regulation No. 101.

B. GTR No. 15 on Worldwide harmonized Light vehicles Test Procedure (WLTP)


15. The Chair of the IWG on WLTP informed (GRPE-70-20) about the progress made on Phase 1B of the development of GTR No. 15. He presented a status report on the remaining issues to be addressed by the group. He highlighted the stressed timeline but expected the completion of this work by October 2015.

16. The expert from the EC presented (GRPE-70-13) the progress made on the transposition of GTR No. 15 into a European Regulation as well as a new Regulation to be annexed to the 1958 Agreement. He presented a roadmap on how to deliver them until January 2016 to GRPE.

17. GRPE agreed that GTR No. 15 shall be transposed into a new Regulation and that some corresponding Transitional Provisions shall be introduced into Regulations Nos. 83 and 101. The expert from the EC stated that a new Regulation corresponding to GTR No. 15 should be harmonized with the corresponding European Regulation. The expert from Japan insisted that the transposition of the GTR should reflect the outcome of the discussions that occurred during the development of GTR No. 15. GRPE agreed to resume consideration of this subject at its June 2015 session.

18. The expert from Japan, as one of the sponsors of the Phase 2 for the development of GTR No. 15 presented the so called “starting note on WLTP Phase 2” (GRPE-70-26) as well as the corresponding questionnaire (GRPE-70-27), already presented at the eighth session of the IWG on WLTP. He indicated that, as an example, the tentative position of his country was provided in GRPE-70-30. GRPE invited all experts to send answers to this questionnaire. The Chair of GRPE recalled the purpose of GRPE-70-28, for information on the position of the European Union regarding future work on electrified vehicles under the umbrella of the IWG on WLTP.

19. The expert from Japan presented the draft position of his Country (GRPE-70-29) on Mobile Air Conditioner. The expert from the EC reported on the corresponding position of the European Union (EU). GRPE agreed that this subject should be considered as an open issue to be addressed when working on Phase 2 of GTR No. 15.

20. GRPE acknowledged the progress made by the group and noted the request of the group for a meeting room for one day during the GRPE week in June 2015.
V. Heavy duty vehicles (agenda item 4)

A. Regulations Nos. 49 (Emissions of compression ignition and positive ignition (LPG and CNG) engines) and 132 (Retrofit Emissions Control devices (REC))

Documentation:  ECE/TRANS/WP.29/GRPE/2015/3
                  Informal documents GRPE-70-06-Rev.1, GRPE-70-07-Rev.1, GRPE-70-24

21. The expert from OICA presented (GRPE-70-24) the proposal contained in ECE/TRANS/WP.29/GRPE/2015/3 adapting the text of the Regulation to the current state of technology and transposing the latest decisions of the EU on OBD Threshold Limits (OBD OTLs). He also introduced minor corrections. GRPE agreed with the proposal as corrected and introduced amendments (GRPE-70-06-Rev.1). The consolidated proposal was provided by the expert of OICA (GRPE-70-07-Rev.1) GRPE adopted ECE/TRANS/WP.29/GRPE/2015/3 as amended by Annex V to this report and requested the secretariat to submit it to WP.29 and AC.1, for consideration and vote at their June 2015 sessions as draft Supplement 3 to 06 series of amendments to Regulation No. 49.

B. GTR 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))

Documentation:  ECE/TRANS/WP.29/2014/84
                  ECE/TRANS/WP.29/2014/85
                  Informal document GRPE-70-15

22. The Chair of GRPE recalled the decision of WP.29 to defer the vote of the Executive Committee of the 1998 Agreement (AC.3) on ECE/TRANS/WP.29/2014/84 and ECE/TRANS/WP.29/2014/85 at its March 2015 session.

23. The expert from the USA presented GRPE-70-15 reporting on the activities of his Country on a correlation study comparing results obtained according to Annex 9 and those obtained according to Annex 10 (in ECE/TRANS/WP.29/2014/84). He offered to share the outcome of this study with GRPE in June 2015. GRPE welcomed this offer and agreed to further exchange information on the emissions of heavy duty vehicles equipped with hybrid powertrains and their environmental performance evaluation.

VI. Regulations Nos. 85 (Measurement of the net power) and 115 (LPG and CNG retrofit systems) and 133 (Recyclability of motor vehicles) (agenda item 5)

Documentation:  Informal documents GRPE-70-02 and GRPE-70-03

24. The expert introduced GRPE-70-02 proposing amendments to Regulation No. 85 avoiding a duplicated correction of the measured engine power from supercharged and turbocharged engines, fitted with a system, which allows compensation for ambient conditions such as temperature and altitude. He added that this proposal was based on the corresponding amendment in Annex XX added to Regulation (EU) No. 136/2014.
The secretariat presented GRPE-70-03 introducing minor amendments to Regulation No. 85.

GRPE agreed with both proposals and requested the secretariat to distribute both proposals combined, with an official symbol, at its June 2015 session.

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

Documentation ECE/TRANS/WP.29/2015/35

27. The secretariat informed about the purpose of ECE/TRANS/WP.29/2015/35 proposed by the Working Party on Lighting and Light-Signalling (GRE) and introducing three additional vehicle categories in the Consolidated Resolution on the Construction of Vehicles (R.E.3) and that this proposal was submitted to WP.29 for consideration and vote in March 2015.

A. Regulations Nos. 96 (Diesel emission (agricultural tractors)) and 120 (Net power of tractors and non-road mobile machinery)

28. There were no proposals to amend Regulation No. 96.

B. GTR No. 11 (Non-road mobile machinery engines)

29. There were no proposals to amend GTR No. 11.

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

Documentation: Informal document GRPE-70-17

30. The Chair of the IWG on PMP presented a status report (GRPE-70-17) on the activities of the group. He presented the four working items under consideration, dealing with the non-exhaust particle emissions. He also presented the on-going considerations of the group on exhaust particle emissions for non-road mobile machineries, on the measurement of Particle Number (PN) during the regeneration and the measurement of particles with a size below twenty-three nanometre down to ten nanometre.

31. GRPE acknowledged the progress made by the group and noted that no meeting would be scheduled during the GRPE week in June 2015.

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

Documentation: Informal document GRPE-70-22

32. The Chair of the IWG on GFV presented a status report (GRPE-70-22) on the activities of his group and in particular those of its Task Force, developing a new Regulation on Heavy Duty Dual Fuel Retrofit.

33. He reported that the group would propose definitions that could be added to those defined by the IWG on Vehicle Propulsion System Definitions (VPSD).
34. He added that the group was investigating possible liaisons with the UNECE Group of Experts on gas and its Task Force D dealing with removing barriers to the use of natural gas as a transportation fuel.

35. GRPE acknowledged the progress made by the group and noted the request for a meeting room during the GRPE week on June 2015.

X. Motorcycles and mopeds (agenda item 9)

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

Document: Informal document GRPE-70-25

36. Introducing GRPE-70-25, the Chair of the IWG on EPPR informed GRPE about recent meetings. He announced that big progress was made on items with high priority (namely the Type I and IV tests as well as the ODB requirements for Powered Two Wheelers) and that the group was expecting to submit a draft proposal for a GTR in June 2015. He added that the group would need a mandate extension of two years to complete its tasks related to items with lower priority. He presented the reflection of the group to consider whether the ODB items could be introduced into GTR No. 5 (ODB) or be included in a new GTR. The expert from Japan explained that GTR No. 5 was structured for a possible extension to items other than emissions one, but was not suitable for other vehicle categories than heavy duty vehicles. GRPE considered the structure of GTR No. 5 as not appropriate for the current exercise and that a new GTR should be developed.

37. GRPE acknowledged the progress of the Group and noted the request for a meeting room during the GRPE week on June 2015.

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

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

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

Document: Informal documents GRPE-69-02 and GRPE-70-12

39. The expert from the Netherlands introduced GRPE-70-12 proposing a solution to the situation, described in GRPE-69-02, on the use of E5 reference fuels used in the EU type approval system. GRPE endorsed GRPE-70-12 and agreed that, at this stage, no further action was needed on this item.

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

Document: Informal documents GRPE-70-23

40. The Chair of the IWG on EVE introduced GRPE-70-23 providing information about the decisions of WP.29 in March 2014 on the activities of the IWG on EVE and reporting on the Part A work in each topic area of the new EVE mandate. China would lead the work item on the method of stating energy consumption. USA and Canada would lead the work on the
battery performance and durability provisions. Germany and Korea would lead the work on the determination of the power of electric vehicles. The group was targeting fall 2015 to complete this phase of work.

41. GRPE acknowledged the progress of the Group and noted the request for a meeting room during the GRPE week in June 2015.

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


42. The Chair of the IWG on VPSD informed GRPE about the outcome of the fifth session of the group. He presented (GRPE-70-21) proposing a new Mutual Resolution (M.R.2) containing an explanatory chapter and a chapter with vehicle propulsion system definitions. The proposal received some comments. GRPE requested the secretariat to distribute GRPE-70-21 with an official symbol at its June 2015 session.

43. The Chair of the IWG on GFV proposed to insert in the VPSD outcome the definitions that would emerge from his group on dual fuelled vehicles.

44. GRPE agreed to defer consideration of GRPE-70-18.

45. GRPE acknowledged the progress made by the group and noted that no meeting would be scheduled during the GRPE week in June 2015.

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

Documentation: ECE/TRANS/WP.29/GRPE/2015/9

46. GRPE agreed to consider ECE/TRANS/WP.29/GRPE/2015/9 at its June 2015 session.

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

47. The chair of GRPE mentioned the progress made by the IWG on IWVTA and its subgroups on Revision 3 to the 1958 Agreement and Regulation No. 0. He added that the related challenge for GRPE was the transposition of GTR No. 15 into a Regulation that takes into account constraints linked to IWVTA and the draft Regulation No. 0.

XV. Vehicles Indoor Air Quality (VIAQ) (agenda item 14)

Documentation: Informal documents GRPE-70-09 and GRPE-70-19

48. The expert from Korea introduced GRPE-70-09 containing the draft terms of reference for an IWG on VIAQ, already endorsed in principle by WP.29, at its November 2014 session. The expert from OICA introduced GRPE-70-19 proposing, among other amendments, to rename this item Vehicle Interior Air Quality (VIAQ). GRPE adopted the proposals for terms of reference to the IWG on VIAQ as reproduced in Annex VI of this report. GRPE noted that the chairmanship shall be under the responsibility of Korea and that the secretariat shall be under the responsibility of OICA.

49. GRPE did not receive any new proposal for amendments to Rule No. 1.

XVII. Exchange of information on emission requirements (agenda item 16)

50. GRPE did not receive any information related to this item.

XVIII. Other business (agenda item 17)

A. Reference to standards

Documentation: Informal document WP.29-164-26

51. At the request of the Representative of Germany at the 164th WP.29 session, the secretariat introduced WP.29-164-26 containing a list of best practices on the reference of standards in regulations managed by WP.29.

B. Tributes

52. On behalf of GRPE, the Chair of GRPE paid tribute to Ms. B. Lopez (France), Mr. J.-F. Renaudin (OICA) and Mr. H. Dekker (TNO), who would no longer attend GRPE sessions, acknowledging their considerable contributions to the activities of GRPE.

XIX. Provisional agenda for the next session

A. Next GRPE session

53. The next GRPE session, including its IWGs sessions, is scheduled to be held in Geneva, Palais des Nations, starting on Monday, 8 June 2015, from 9.30 a.m. until Friday, 12 June 2015, at 5.30 p.m., subject to the confirmation by the secretariat (see GRPE-71-01, forthcoming). Interpretation would be provided from 9 June (2.30 p.m.) to 12 June (12.30 p.m.) 2015.

B. Provisional agenda for the next proper GRPE session

54. GRPE agreed on the following provisional agenda for its next session:

1. Adoption of the agenda.


3. Light vehicles:

   (a) 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);
(b) Global technical regulation No. 15 on Worldwide harmonized Light vehicles Test Procedures (WLTP).

4. Heavy duty vehicles:
   (a) Regulations Nos. 49 (Emissions of compression ignition and positive ignition (LPG and CNG) engines) and 132 (Retrofit Emissions Control devices (REC));
   (b) Global technical regulations 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. Regulations Nos. 85 (Measurement of the net power), 115 (LPG and CNG retrofit systems) and 133 (Recyclability of motor vehicles).

6. Agricultural and forestry tractors, non-road mobile machinery:
   (a) Regulations Nos. 96 (Diesel emission (agricultural tractors)) and 120 (Net power of tractors and non-road mobile machinery);
   (b) Global technical regulation No. 11 (Non-road mobile machinery 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) Regulations Nos. 40 (Emission of gaseous pollutants by motor cycles) and 47 (Emission of gaseous pollutants of mopeds);
   (c) Global technical regulation No. 2 (World-wide Motorcycle emissions Test Cycle (WMTC)).


13. International Whole Vehicle Type Approval (IWVTA).

14. Vehicles Indoor Air Quality (VIAQ).


16. Exchange of information on emission requirements.

17. Any other business.
C. Informal meetings in conjunction with the next GRPE session

55. The informal meetings, subject to confirmation:

<table>
<thead>
<tr>
<th>Date</th>
<th>Group</th>
<th>Acronym</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday 8 June 2015</td>
<td>Electric Vehicles and the Environment</td>
<td>EVE</td>
<td>9.30 a.m. – 12.30 p.m.</td>
</tr>
<tr>
<td></td>
<td>Gaseous Fuelled Vehicles</td>
<td>GFV</td>
<td>2.30 p.m. – 5.30 p.m.</td>
</tr>
<tr>
<td>Tuesday 9 June 2015</td>
<td>Environmental and Propulsion Performance Requirements of L-category vehicles</td>
<td>EPPR</td>
<td>9.30 a.m. – 12.30 p.m.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>2.30 p.m. – 5.30 p.m.</td>
</tr>
<tr>
<td>Wednesday 10 June 2015</td>
<td>Worldwide harmonized Light vehicles Test Procedure</td>
<td>WLTP</td>
<td>9.30 a.m. – 12.30 p.m.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2.30 p.m. – 5.30 p.m.</td>
</tr>
<tr>
<td>Friday 12 June 2015</td>
<td>Vehicle Interior Air Quality</td>
<td>VIAQ</td>
<td>2.30 p.m. – 5.30 p.m.</td>
</tr>
</tbody>
</table>

56. The agendas of these meetings will be prepared by the respective secretaries and distributed to the members of each Group prior to each meeting.
Annex I

List of informal documents distributed without an official symbol

<table>
<thead>
<tr>
<th>GRPE-70-</th>
<th>Transmitted by</th>
<th>Title</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Rev.1</td>
<td>Secretariat</td>
<td>Informal meetings in conjunction with the GRPE (proper) session: schedule and room reservation</td>
<td>A</td>
</tr>
<tr>
<td>2</td>
<td>OICA</td>
<td>Proposal for Supplement 7 to Regulation No. 85</td>
<td>C</td>
</tr>
<tr>
<td>3</td>
<td>Secretariat</td>
<td>Proposal for amendments to Regulation No. 85 (Measurement of the net power)</td>
<td>C</td>
</tr>
<tr>
<td>4</td>
<td>OICA</td>
<td>Amendments to ECE/TRANS/WP.29/GRPE/2015/4</td>
<td>B</td>
</tr>
<tr>
<td>5</td>
<td>OICA</td>
<td>Amendments to ECE/TRANS/WP.29/GRPE/2015/5</td>
<td>B</td>
</tr>
<tr>
<td>6-Rev.1</td>
<td>OICA</td>
<td>Amendments to ECE/TRANS/WP.29/GRPE/2015/3</td>
<td>B</td>
</tr>
<tr>
<td>7-Rev.1</td>
<td>OICA</td>
<td>Amendments to ECE/TRANS/WP.29/GRPE/2015/3 (Consolidated)</td>
<td>A</td>
</tr>
<tr>
<td>8-Rev.2</td>
<td>Secretariat</td>
<td>Updated provisional agenda (incl. all informal documents)</td>
<td>A</td>
</tr>
<tr>
<td>9</td>
<td>Korea</td>
<td>Proposal for terms of reference and rules of procedure for the Informal Working Group on Vehicle Indoor Air Quality (VIAQ)</td>
<td>A</td>
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<td>11</td>
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<td>The Netherlands</td>
<td>Proposal to withdraw GRPE-69-02 (on amendments to GTR No. 2)</td>
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<td>13</td>
<td>EC</td>
<td>Transposition of WLTP</td>
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</tr>
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<td>14</td>
<td>OICA</td>
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</tr>
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<td>USA</td>
<td>Comparison of Heavy Duty Hybrid Test Procedures Drafted in GTR No. 4</td>
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<td>PMP</td>
<td>Status report</td>
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</tr>
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<td>18</td>
<td>VPSD and OICA</td>
<td>Proposal for amendments to ECE/TRANS/WP.29/2014/84 (draft Amend. 3 to GTR No. 4)</td>
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<td>VPSD</td>
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<td>22</td>
<td>GFV</td>
<td>Status report</td>
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<td>EVE</td>
<td>Status report</td>
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<td>25</td>
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<td>Japan</td>
<td>WLTP Phase 2 - Starting note</td>
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<td>Japan</td>
<td>WLTP Phase 2 - Questionnaire</td>
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Notes:

A  Consideration by GRPE 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

Informal meetings held in conjunction with the GRPE session

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Group</th>
<th>Acronym</th>
</tr>
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<tbody>
<tr>
<td>12 January 2015</td>
<td>9:30 a.m. - 12:30 p.m.</td>
<td>Environmental and Propulsion Performance Requirements of L-category vehicles</td>
<td>EPPR</td>
</tr>
<tr>
<td></td>
<td>2:30 p.m. - 5:30 p.m.</td>
<td>Electric Vehicles and the Environment</td>
<td>EVE</td>
</tr>
<tr>
<td>13 January 2015</td>
<td>9:30 a.m. - 12:30 p.m.</td>
<td>Gaseous Fuelled Vehicles</td>
<td>GFV</td>
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<td>9:30 a.m. - 12:30 p.m.</td>
<td>Environmental and Propulsion Performance Requirements of L-category vehicles</td>
<td>EPPR</td>
</tr>
<tr>
<td></td>
<td>2:30 p.m. - 5:30 p.m.</td>
<td>Particle Measurement Programme</td>
<td>PMP</td>
</tr>
<tr>
<td></td>
<td>2:30 p.m. - 5:30 p.m.</td>
<td>Vehicle Propulsion System Definition</td>
<td>VPSD</td>
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<tr>
<td>14 January 2015</td>
<td>9:30 a.m. - 12:30 p.m.</td>
<td>Worldwide harmonized Light vehicles Test Procedure</td>
<td>WLTP</td>
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## Annex III

[English only]

### List of GRPE informal working groups, task forces and subgroups

<table>
<thead>
<tr>
<th>Name (Acronym) (Status)</th>
<th>Chair or Co-chairs</th>
<th>Secretaries</th>
<th>End of mandate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental and Propulsion Performance Requirements of L-category vehicles (EPPR) (group)</td>
<td>Petter Åsman, <a href="mailto:petter.asman@trafikverket.se">petter.asman@trafikverket.se</a></td>
<td>Thomas Vercammen, <a href="mailto:t.vercammen@acem.eu">t.vercammen@acem.eu</a></td>
<td>June 2016</td>
</tr>
<tr>
<td>Electric Vehicles and the Environment (EVE) (group)</td>
<td>Michael Olechiw, <a href="mailto:Olechiw.Michael@epamail.epa.gov">Olechiw.Michael@epamail.epa.gov</a></td>
<td>Stéphane Couroux, <a href="mailto:stephane.couroux@ec.gc.ca">stephane.couroux@ec.gc.ca</a></td>
<td>November 2018</td>
</tr>
<tr>
<td></td>
<td>Chen Chunmei (vice-Chair), <a href="mailto:chencm@miit.gov.cn">chencm@miit.gov.cn</a></td>
<td>Erin Marchington, <a href="mailto:Erin.Marchington@ec.gc.ca">Erin.Marchington@ec.gc.ca</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kazuyuki Narusawa (vice-Chair), <a href="mailto:narusawa@ntsel.go.jp">narusawa@ntsel.go.jp</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gaseous Fuelled Vehicles (GFV) (group)</td>
<td>André Rijnders, <a href="mailto:arijnders@rdw.nl">arijnders@rdw.nl</a></td>
<td>Jeffrey Seisler, <a href="mailto:jseisler@cleanfuelsconsulting.org">jseisler@cleanfuelsconsulting.org</a></td>
<td>June 2016</td>
</tr>
<tr>
<td>Heavy Duty Dual-Fuel Task Force (HDDV TF) (task force)</td>
<td>Henk Dekker, <a href="mailto:henk.j.dekker@tno.nl">henk.j.dekker@tno.nl</a></td>
<td>Jeffrey Seisler, <a href="mailto:jseisler@cleanfuelsconsulting.org">jseisler@cleanfuelsconsulting.org</a></td>
<td></td>
</tr>
<tr>
<td>Liquefied Natural Gas Task Force (LNG TF) (task force)</td>
<td>Paul Dijkhof, <a href="mailto:paul.dijkhof@kiwa.nl">paul.dijkhof@kiwa.nl</a></td>
<td>Jeffrey Seisler, <a href="mailto:jseisler@cleanfuelsconsulting.org">jseisler@cleanfuelsconsulting.org</a></td>
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<tr>
<td></td>
<td></td>
<td>Jaime Del Alamo, <a href="mailto:jaime.alamo@ngvaeurope.eu">jaime.alamo@ngvaeurope.eu</a></td>
<td></td>
</tr>
<tr>
<td>Particle Measurement Programme (PMP) (group)</td>
<td>Giorgio Martini, <a href="mailto:giorgio.martini@jrc.ec.europa.eu">giorgio.martini@jrc.ec.europa.eu</a></td>
<td>Caroline Hosier, <a href="mailto:chosier@ford.com">chosier@ford.com</a></td>
<td>June 2017</td>
</tr>
<tr>
<td>Vehicle Interior Air Quality (VIAQ) (group)</td>
<td>Jong Soon Lim, <a href="mailto:jongsoon@ts2020.kr">jongsoon@ts2020.kr</a></td>
<td>Daniel Nesa, <a href="mailto:daniel.nesa@renault.com">daniel.nesa@renault.com</a></td>
<td>November 2017</td>
</tr>
<tr>
<td>Vehicle Propulsion System Definitions (VPSD) (group)</td>
<td>Christoph Albus, <a href="mailto:christoph.albus@bmvi.bund.de">christoph.albus@bmvi.bund.de</a></td>
<td>Daniela Leveratto, <a href="mailto:dleveratto@oica.net">dleveratto@oica.net</a></td>
<td>June 2015</td>
</tr>
<tr>
<td>Worldwide harmonized Light vehicles Test Procedure (WLTP) (group)</td>
<td>Stephan Redmann, <a href="mailto:stephan.redmann@bmvbs.bund.de">stephan.redmann@bmvbs.bund.de</a></td>
<td>Noriyuki Ichikawa (co-Technical Secretary), noriyuki <a href="mailto:Ichikawa@mail.toyota.co.jp">Ichikawa@mail.toyota.co.jp</a></td>
<td>June 2016</td>
</tr>
<tr>
<td></td>
<td>Kazuki Kobayashi (Vice-Chair), <a href="mailto:ka-koba@shinsa.ntsel.go.jp">ka-koba@shinsa.ntsel.go.jp</a></td>
<td>Konrad Kolesa (co-Technical Secretary), <a href="mailto:konrad.kolesa@audi.de">konrad.kolesa@audi.de</a></td>
<td></td>
</tr>
</tbody>
</table>
Annex IV

Amendments to Regulation No. 83

A. Adopted amendments to ECE/TRANS/WP.29/GRPE/2015/4

Adopted on the basis of GRPE-70-04 (see paras. 9 and 13)

In ECE/TRANS/WP.29/GRPE/2015/4,

Annex 11, paragraph 2.10., amend to read:

"2.10. A "driving cycle" consists of engine start-up key-on, a driving mode where a malfunction would be detected if present, and engine shut-off key-off.

B. Adopted amendments to ECE/TRANS/WP.29/GRPE/2015/5

Adopted on the basis of GRPE-70-05 (see paras. 9 and 14)

In ECE/TRANS/WP.29/GRPE/2015/5,

Annex 11, Appendix 1, paragraph 7.6.1., amend to read:

"7.6.1. The OBD system shall report, in accordance with the ISO 15031-5 specifications of the standard listed in paragraph 6.5.3.2.(a) of this appendix, the ignition cycle counter and general denominator as well as separate numerators and denominators for the following monitors, if their presence on the vehicle is required by this annex:

(a) Catalysts (each bank to be reported separately);
(b) Oxygen/exhaust gas sensors, including secondary oxygen sensors (each sensor to be reported separately);
(c) Evaporative system;
(d) EGR system;
(e) VVT system;
(f) Secondary air system;
(g) Particulate filter;
(h) NOx after-treatment system (e.g. NOx absorber adsorber, NOx reagent/catalyst system);
(i) Boost pressure control system."

Annex 11, paragraph 2.10., amend to read:

"2.10. A "driving cycle" consists of engine start-up key-on, a driving mode where a malfunction would be detected if present, and engine shut-off key-off."
Annex V

Amendments to ECE/TRANS/92.29/GRPE/2015/3

Amended on the basis of GRPE-70-04 (see para. 21)

Remark: A consolidated version of adopted text included in this annex is contained in GRPE-70-07-Rev.1

In ECE/TRANS/92.29/GRPE/2015/3, paragraphs 13.2.1., amend to read:

“13.2.1. Contracting Parties applying this Regulation shall, from the date of entry into force of the 06 series of amendments to this Regulation, grant an ECE approval to an engine system or vehicle only if it complies with:

(a) The requirements of paragraph 4.1. of this Regulation;
(b) The performance monitoring requirements of paragraph 2.3.2.2. of Annex 9A in the case of compression ignition and dual-fuel engines and vehicles;
(c) The NO\textsubscript{x} OTL monitoring requirements as set out in the row "phase in period" of the Tables 1 and 2 of Annex 9A, in the case of compression ignition and dual-fuel engines and vehicles;
(d) The NO\textsubscript{x} OTL monitoring requirements as set out in the row "phase in period" of Table 2 of Annex 9A, in the case of positive ignition engines and vehicles;
(e) The Reagent quality and consumption "phase-in" requirements as set out in paragraphs 7.1.1.1. and 8.4.1.1. of Annex 11.”

Paragraph 13.3., amend to read:

“13.3. Limit of validity of type approvals

13.3.1. As from the 1 January 2014 31 December 2013, Contracting Parties may refuse type approvals granted to this Regulation as amended by the 05 series of amendments shall cease to be valid, which do not comply with the requirements mentioned in paragraph 13.2.1. above.

13.3.2. As from 1 September 2015, Contracting Parties may refuse type approvals of positive ignition engines and vehicles granted to this Regulation, as amended by the 06 series of amendments, which do not comply with the requirements of mentioned in paragraph 13.2.2. above, shall cease to be valid.

13.3.3. As from 31 December 2016, Contracting Parties may refuse type approvals granted to this Regulation, as amended by the 06 series of amendments, which do not comply with the requirements of mentioned in paragraph 13.2.3. above, shall cease to be valid.”

Annex 1, Part 1, in the table, delete paragraph 3.2.12.2.8.6.
Annex 3, Table 1, including reference notes, replace to read:

"Table 1
Letters with reference to requirements of OBD and SCR systems

<table>
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<tr>
<th>Character</th>
<th>NO\textsubscript{OTL}\textsuperscript{1}</th>
<th>PM\textsubscript{OTL}\textsuperscript{2}</th>
<th>CO\textsubscript{OTL}\textsuperscript{6}</th>
<th>IUPR\textsuperscript{13}</th>
<th>Reagent quality</th>
<th>Additional OBD monitors\textsuperscript{12}</th>
<th>Implementation dates: new types</th>
<th>Date when Contracting Parties may refuse Type Approval</th>
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<td>A\textsuperscript{9,10}</td>
<td>Row &quot;phase-in period&quot; of Tables 1 and 2 of Annex 9A</td>
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<td>Phase-in\textsuperscript{7}</td>
<td>Phase-in\textsuperscript{4}</td>
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<td>Entry into force date of 06 series of Regulation No. 49</td>
<td>01 September 2015\textsuperscript{9} 31 December 2016\textsuperscript{10}</td>
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<td>B\textsuperscript{11}</td>
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<tr>
<td>C</td>
<td>Row &quot;general requirements&quot; of Tables 1 and 2 of Annex 9A</td>
<td>Row &quot;general requirements&quot; of Table 1 of Annex 9A</td>
<td>Row &quot;general requirements&quot; of Table 2 of Annex 9A</td>
<td>General\textsuperscript{8}</td>
<td>General\textsuperscript{5}</td>
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Notes:
1 "NO\textsubscript{X} OTL" monitoring requirements as set out in Table 1 of Annex 9A for compression ignition and dual-fuel engines and vehicles and in Table 2 of Annex 9A for positive ignition engines and vehicles.
2 "PM OTL" monitoring requirements as set out in Table 1 of Annex 9A for compression ignition and dual-fuel engines and vehicles.
3 Performance monitoring requirements as set out in paragraph 2.3.2.2. of Annex 9A.
4 Reagent quality "phase-in" requirements as set out in paragraph 7.1.1.1. of Annex 11.
5 Reagent quality "general" requirements as set out in paragraph 7.1.1. of Annex 11.
6 "CO OTL" monitoring requirements as set out in Table 2 of Annex 9A for positive ignition engines and vehicles.
7 excluding the statement required by paragraph 6.4.1. of Annex 9A.
8 including the statement required by paragraph 6.4.1. of Annex 9A.
9 For positive-ignition engines and vehicles.
10 For compression-ignition and dual-fuel engines and vehicles.
11 Only applicable to positive-ignition engines and vehicles.
12 "Additional provisions concerning monitoring requirements" as set out in paragraph 2.3.1.2. of Annex 9A.
13 IUPR specifications are set out in Annexes 9A and 9C of this Regulation. PI engines are not subjected to IUPR."

ECE/TRANS/WP.2/GRPE/70
Annex 9A

Table 2, amend to read:

"Table 2

<table>
<thead>
<tr>
<th>Phase-in period</th>
<th>Limit in mg/kWh</th>
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<tr>
<td>NO\textsubscript{x}</td>
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<tr>
<td>CO\textsubscript{1}</td>
<td>7 500\textsuperscript{1}</td>
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<tr>
<td>General requirements</td>
<td>1 200</td>
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<tr>
<td></td>
<td>7 500</td>
</tr>
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</table>

\textsuperscript{1} The OTL for CO shall be set at a later stage. The transitional provisions related to introduction of the CO OTLs are specified in paragraphs 13.2.2. and 13.3.2. of this Regulation."

Annex 11,

Paragraph 8., title, amend to read:

"8. Reagent consumption and dosing activity monitoring"

Paragraph 8.1. amend to read:

"8.1. The vehicle shall include a means of determining reagent consumption, interruption of the reagent dosing activity and providing off-board access to consumption information."

Paragraph 8.3.1. amend to read:

"8.3.1. The maximum detection period for insufficient reagent consumption is 48 5 hours or the period equivalent to a demanded reagent consumption of at least 45 2 litres, whichever is longer."

Insert new paragraph 8.3.1.1., to read:

"8.3.1.1. When the reagent consumption is monitored by using at least one of the following parameters:

(a) The level of reagent in the on-vehicle storage tank, or

(b) The flow of reagent or quantity of reagent injected at a position as close as technically possible to the point of injection into an exhaust after-treatment system,

the maximum detection period for insufficient reagent consumption is extended to 48 hours or to the period equivalent to a demanded reagent consumption of at least 15 litres, whichever is longer."

Delete paragraph 8.3.2.

Paragraph 8.4.1., amend to read:

"8.4.1. The driver warning system described in paragraph 4. shall be activated if a deviation of more than 20 fifty per cent between the average reagent consumption and the average demanded reagent consumption by the engine system over a period to be defined by the manufacturer, which shall not be longer than the maximum period defined in paragraph 8.3.1., or, when applicable, paragraph 8.3.1.1., is detected. When the warning system
includes a message display system, it shall display a message indicating the reason for the warning (for example: "urea dosing malfunction", "AdBlue dosing malfunction", or "reagent dosing malfunction")."

Annex 15,

*Insert new paragraphs 4.2.2.3.1. to 4.2.2.3.3., to read:*

"4.2.2.3.1. The power limitation option may only be activated if the system concludes that the gas tank is empty not later than 5 minutes after engine cranking, the engine being at idle.

4.2.2.3.2. The power limitation option shall not be activated when the system concludes that the gas tank is empty from a previous driving cycle and the gas tank has not been refilled.

4.2.2.3.3. The manufacturer shall demonstrate at type-approval that the power limitation option can only be activated during a repair or maintenance operation."
Annex VI

Terms of reference and rules of procedure for the Informal Working Group on Vehicle Interior Air Quality (VIAQ)

Adopted on the basis of GRPE-70-09, amended (see para 48).

1. Background

1.1. A variety of interior materials and adhesives are used for the construction of the interior space of vehicles, containing several chemical constituents. As a result, various kinds of chemical substances may be emitted from the interior materials inside the completed vehicles. In some circumstances, such as the early stages of vehicle life and elevated temperatures, the amounts of chemical substances emitted e.g. Volatile Organic Compounds (VOCs) can be particularly high and some of them may impair air quality in the vehicle.

1.2. Notwithstanding deviations in the extent and a certain degree of dependency on the reaction of each individual, some of the substances that can be emitted inside vehicles could have the potential to cause symptoms such as nausea, allergies, fatigue, stinging eyes and headaches. Beyond affecting at first drivers’ and passengers’ well-being and comfort, such symptoms may have also consequences on health but also safe driving.

1.3. In order to improve air quality in the vehicle, discussions and decisions by the international community involving recommendation to minimize emission of VOCs and harmful substances upon manufacturing vehicles are necessary in a timely manner.

2. Objective

2.1. The informal working group (IWG) on VIAQ will have an open structure which will enable the exchange of information and experiences on relevant regulations, policy measures and standardization efforts.

2.2. Internationally, several different standards already exist but the exact methods of measurements and pollutant emission requirements are still not defined under the 1958 Agreement or 1998 Agreement. The objective of this proposal is to develop a recommendation (R.E.3, S.R.1 or a new Mutual Resolution) concerning the protection of passengers from VOCs emitted by interior materials used for the construction of vehicles.

2.3. The recommendation (R.E.3, S.R.1 or a new Mutual Resolution) shall include provisions and harmonised test procedures for the measurement of interior VOCs taking into account existing standards.

2.4. The IWG shall conduct comprehensive studies for the existing individual contents regarding management of interior air quality of vehicles. It shall draft a new recommendation to provide drivers and passengers with better driving environments for vehicles, also enabling more cost-effective management for the vehicle industry through unification of standards and measurement methods.
3. Terms of reference

3.1. The following terms of reference describe the main tasks of the new IWG.

(a) Identify and collect the information and research data on interior air quality and its relevance for vehicles, taking into account the activities being carried out by various governments, non-governmental organizations and universities.

(b) Identify and understand the current regulatory requirements with respect to vehicle interior air quality in different markets.

(c) Identify, review and assess existing test procedures suitable for the measurement of emissions of vehicle interior air pollutants (including sample collection methods and analysis methods, etc.).

(d) Develop provisions and harmonised test procedures.

(e) Draft a new recommendation (R.E.3 under the 1958 Agreement, S.R.1 under the 1998 Agreement or a new Mutual Resolution under both Agreements) concerning the protection of drivers and passengers from VOCs emitted by interior materials used in the construction of vehicles, including provisions and harmonised test procedures.

(f) Stay abreast of developing issues through regular dialogue and expert presentations.

4. Timeline

4.1. The target completion date for the work of the informal working group and possible adoption of the recommendation (R.E.3, S.R.1 or a new Mutual Resolution) shall be the 173rd session of WP.29 in November 2017.

(a) Nov. 2014: Consideration of drafted terms of reference of the proposal to establish the VIAQ informal working group by WP.29/AC.3.

(b) Jan. 2015: Approval of terms of reference of the VIAQ by GRPE.

(c) Mar. 2015: Approval of the VIAQ informal working group by WP.29.

(d) Jun. 2015: First VIAQ informal working group meeting during the 71st session of GRPE.

(e) 2015 – 2017: Meetings of the IWG, with regular reporting to GRPE and WP.29.

(f) Jun. 2017: Adoption of the recommendation on VIAQ by GRPE.

(g) Nov. 2017: Adoption of the recommendation on VIAQ by WP.29.

5. Scope and work items

5.1. Information collection

(a) Collect current research on vehicle interior air quality.

(b) Review and assess existing test procedures of each regulation.
(c) Define the category of vehicles to which vehicle interior air quality recommendations will apply.

5.2. Development of relevant provisions and harmonized test procedure for VIAQ.
   (a) Determine the test conditions, test apparatus and materials, whole vehicle test chamber, test vehicle conditions, measurement procedures, etc.
   (b) Set the sampling point, sampling devices, sampling procedures, analysis of samples, data processing, etc.
   (c) Develop a draft recommendation for a test procedure, for inclusion in RE.3 and/or SR1 or a new Mutual Resolution.

6. Rules of procedure

6.1. The following rules of procedure describe the functioning principles of the new informal working group.
   (a) The IWG is open to all experts from any country or organization of WP.29 and its subsidiary bodies. A limitation of the number of participants for the IWG is not foreseen.
   (b) A Chair (Republic of Korea) and a Secretary (OICA) will manage the IWG.
   (c) The official language of the IWG will be English.
   (d) All documents and/or proposals shall be submitted to the secretary of the group in a suitable electronic format, preferably in line with the UNECE guidelines in advance of the meetings. The group may refuse to discuss any item or proposal which has not been circulated 5 working days in advance of the scheduled meetings.
   (e) The IWG shall meet regularly in conjunction with the GRPE sessions, presuming the availability of meeting rooms. Additional meetings will be organized upon demand.
   (f) An agenda and related documents will be circulated to all members of the informal working group in advance of all scheduled meetings.
   (g) The work process will be developed by consensus. When consensus cannot be reached, the Chair of the informal group shall present the different points of view to GRPE. The Chair may seek guidance from GRPE as appropriate.
   (h) The progress of the informal group will be routinely reported to GRPE orally or as an informal document by the Chair or the secretary.
   (i) All documents shall be distributed in digital format. The specific VIAQ section on the UNECE website shall be used for this purpose.
Annex VII

Amendments to ECE/TRANS/WP.29/GRPE/2015/2

Adopted on the basis of GRPE-79-16-Rev.1, (see para. 13) and re-edited by the secretariat

Paragraph 12.1.2., shall be deleted.

"12.1.2. Type approval and conformity of production verification provisions, as specified in this Regulation as amended by the 06 series of amendments, remain applicable until the dates referred to in paragraphs 12.2.1. and 12.2.2. of this Regulation."

Paragraph 12.2., amend to read:

"12.2. Type-approvals"

Paragraph 12.2.1., amend to read:

"12.2.1. As from the official date of entry into force of the 07 series of amendments for vehicles of category M or N\textsubscript{1} (Class I) and 1 September 2015 for vehicles of category N\textsubscript{1} (Classes II or III) and category N\textsubscript{2}, Contracting Parties applying this Regulation shall, from the 1 September 2014 for vehicles of category M or N\textsubscript{1} (Class I) and 1 September 2015 for vehicles of category N\textsubscript{1} (Classes II or III) and category N\textsubscript{2}, grant an ECE approval to new vehicle types only if they comply with:

(a) The applicable limits for the Type I test in Table 1 specified in paragraph 5.3.1.4. of this Regulation; and

(b) The Preliminary OBD threshold limits in Table A11/2 specified in paragraph 3.3.2.2. of Annex 11 to this Regulation."

Paragraph 12.2.2., amend to read:

"12.2.2. As from 1 September 2015 for vehicles of category M or N\textsubscript{1} (Class I), and from 1 September 2016 for vehicles of category N\textsubscript{1} (Classes II or III) and category N\textsubscript{2}, Contracting Parties applying this Regulation shall, from the 1 September 2015 for vehicles of category M or N\textsubscript{1} (Class I) and 1 September 2016 for vehicles of category N\textsubscript{1} (Classes II or III) and category N\textsubscript{2}, grant an ECE approval to new vehicles only if they not be obliged to accept a type-approval which has not been granted in accordance with the 07 series of amendments to this Regulation which does not comply with:

(a) The applicable limits for the Type I test in Table 1 specified in paragraph 5.3.1.4. of this Regulation; and

(b) The Preliminary OBD threshold limits in Table A11/2 specified in paragraph 3.3.2.2. of Annex 11 to this Regulation."

Paragraph 12.2.3., amend to read:

"12.2.3. As from 1 September 2017 for vehicles of category M or N\textsubscript{1} (Class I) and 1 September 2018 for vehicles of category N\textsubscript{1} (Classes II or III) and category N\textsubscript{2}, Contracting Parties applying this Regulation as amended by the 07 series of amendments shall, from the 1 September 2017 for vehicles of category M or N\textsubscript{1} (Class I) and 1 September 2018 for vehicles of category
Paragraph 12.2.4., amend to read:

"12.2.4. As from 1 September 2018 for vehicles of category M or N₁ (Class I), and from 1 September 2019 for vehicles of category N₂ (Classes II or III) and category N₂, Contracting Parties applying this Regulation shall, from the 1 September 2018 for vehicles of category M or N₁ (Class I) and 1 September 2019 for vehicles of category N₂ (Classes II or III) and category N₂, grant an ECE approval to new vehicles only if they not be obliged to accept a type-approval which has not been granted in accordance with the 07 series of amendments to this Regulation which does not comply with:

(a) The applicable limits for the Type I test in Table 1 specified in of paragraph 5.3.1.4. of this Regulation; and

(b) The Final OBD threshold limits in Table A11/1 specified in of paragraph 3.3.2.1. of Annex 11 to this Regulation."