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**ECONOMIC COMMISSION FOR EUROPE**

INLAND TRANSPORT COMMITTEE

World Forum for Harmonization of Vehicle Regulations (WP.29)

Working Party on Pollution and Energy (GRPE)

REPORT OF THE WORKING PARTY ON POLLUTION AND ENERGY (GRPE)  
ON ITS FORTY-SEVENTH SESSION 1/

(12 - 16 January 2004)

ATTENDANCE

1. GRPE held its forty-seventh session from 12 to 16 (morning only) January 2004, under the chairmanship of Mr. B. Gauvin (France). Experts from the following countries participated in the work following Rule 1(a) of the Rules of Procedure of WP.29 (TRANS/WP.29/690): Belgium; Canada; Czech Republic; Denmark; Finland; France; Germany; Hungary; India; Italy; Japan; Netherlands; Norway; Poland; Republic of South Africa; Russian Federation; Serbia and Montenegro; Spain; Sweden; Switzerland; United Kingdom; United States of America. Experts from the European Commission (EC) also participated. Experts from the following non-governmental organizations took part in the session: International Organization for Standardization (ISO); International Touring Alliance/International Automobile Federation (AIT/FIA); International Organization of Motor Vehicle Manufacturers (OICA); European Association of Automobile Suppliers (CLEPA); International Motorcycle Manufacturers Association (IMMA); The Oil Companies' European Organization for Environment, Health and Safety (CONCAWE); Association for Emissions Control by Catalyst (AECC/CEFIC); Technical Committee of Petroleum Additive Manufacturers in Europe (ATC/CEFIC); European Natural Gas Vehicle Association (ENGVA); European LPG Association (AEGPL); European Association of Internal Combustion Engine Manufacturers (EUROMOT); European Committee of Associations of Manufacturers of Agricultural Machinery (CEMA); Committee for European Construction Equipment (CECE). Experts from the Engine Manufacturers Association (EMA) participated at the invitation of the secretariat.

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1/ Following the agreement reached at the forty-sixth session, the forty-seventh session of GRPE proper was preceded by four informal meetings (see agenda TRANS/WP.29/GRPE/2004/1 and Add.1, and paras. 2 to 5 below).

2. The third informal meeting of the GRPE working group on Non-Road Mobile Machinery (NRMM), was held on 12 January 2004 (morning only), under the chairmanship of Mr. De Santi (European Commission). Experts from the following countries and organizations participated in the work: Belgium; Canada; Czech Republic; Finland; France; Germany; Hungary; India; Japan; Netherlands; Norway; Poland; Republic of South Africa; Russian Federation; Sweden; United Kingdom; United States of America; European Commission (EC); International Organization for Standardization (ISO); International Organization of Motor Vehicle Manufacturers (OICA); Association for Emissions Control by Catalyst (AECC/CEFIC); European Association of Internal Combustion Engine Manufacturers (EUROMOT); Engine Manufacturers Association (EMA); Committee for European Construction Equipment (CECE). A summary of the proceedings of this informal meeting is given below (paras. 17 and 18).

3. The sixth informal meeting of the GRPE working group on Off-Cycle emissions (Off-Cycle), initially scheduled to be held on 12 January 2004 (afternoon only) was cancelled (see para. 9). The GRPE Chairman agreed with the request by Germany to hold instead, under the chairmanship of Mr. C. Albus (Germany), the eighth informal meeting of the GRPE working group on Hydrogen and Fuel Cell-Vehicles (HFCV). Experts from the following countries and organizations participated in the work: Belgium; Canada; Czech Republic; Finland; France; Germany; Hungary; India; Japan; Netherlands; Norway; Poland; Republic of South Africa; Russian Federation; Sweden; United Kingdom; United States of America; European Commission (EC); International Organization for Standardization (ISO); International Organization of Motor Vehicle Manufacturers (OICA); Association for Emissions Control by Catalyst (AECC/CEFIC); Engine Manufacturers Association (EMA). A summary of the proceedings of this informal meeting is given below (paras. 29-36).

4. The seventh informal meeting of the GRPE working group on world-wide harmonized heavy-duty vehicle on-board diagnostics (WWH-OBDD) was held on 13 January 2004, under the chairmanship of Mr. M. Odaka (Japan). Experts from the following countries and organizations participated in the work: Belgium; Canada; Czech Republic; Finland; France; Germany; Hungary; India; Japan; Netherlands; Norway; Poland; Republic of South Africa; Russian Federation; Sweden; United Kingdom; United States of America; European Commission (EC); International Organization for Standardization (ISO); International Organization of Motor Vehicle Manufacturers (OICA); Association for Emissions Control by Catalyst (AECC/CEFIC), Committee for European Construction Equipment (CECE). A summary of the proceedings of this informal meeting is given below (paras. 10 and 11).

5. The eighth informal meeting of the GRPE Particle Measurement Programme (PMP) working group was held on 14 January 2004, under the Chairmanship of Mr. M. Dunne (United Kingdom). Experts from the following countries and organizations participated in the work: Belgium; Canada; Czech Republic; Denmark; Finland; France; Germany; Hungary; India; Japan; Netherlands; Norway; Poland; Republic of South Africa; Russian Federation; Serbia and Montenegro; Sweden; Switzerland; United Kingdom; United States of America; European Commission (EC); International Touring Alliance/International Automobile Federation (AIT/FIA); International Organization of Motor Vehicle Manufacturers (OICA); Oil Companies' European Organization for Environment, Health and Safety (CONCAWE); Association for Emissions Control by Catalyst (AECC/CEFIC). A summary of the proceedings of this informal meeting is given below (paras. 12-14).

1. REGULATION No. 49 (Emissions of C.I., NG and P.I. (LPG) engines)

1.1. World-wide heavy-duty certification procedure (WHDC)

Documentation: Informal document Nos. GRPE-47-14 and GRPE-47-19 of annex 1 to this report.

6. The expert from the European Commission introduced the formal proposal to develop a global technical regulation (gtr) regarding the heavy-duty vehicle exhaust-emissions type approval/certification procedure (informal document No. GRPE-47-19). GRPE agreed on that document and requested the secretariat to submit it to WP.29 and AC.3, for consideration at their sessions in March 2004 (note by the secretariat: see TRANS/WP.29/2004/29).

7. The Secretary of the WHDC working group, Mr. J. Stein (OICA), informed GRPE on the status of the group's work and the interim results of the round robin tests. He introduced informal document No. GRPE-47-14 presenting the general structure of the draft gtr. GRPE agreed on that structure and noted that the issue of the elaboration of a gtr including specific performance requirements (limit values) was still under consideration. Mr. Stein volunteered to present, at the next GRPE session, a new document including the technical details of the test procedure and expressed the need to set up a drafting team in order to finalize the draft gtr. GRPE acknowledged the work done by Mr. Stein and endorsed his request.

8. The GRPE Chairman expressed his thanks to Mr. Greening and Mr. Stein for their contributions. He requested the preparedness of GRPE experts, especially those from the Contracting Parties to the 1998 Agreement, to join the afore-mentioned drafting team.

1.2. Off-Cycle emissions (Off-Cycle)

9. The Chairman informed GRPE that the sixth informal meeting of the Off-Cycle working group, initially scheduled to be held in the afternoon of 12 January 2004, was cancelled due to the fact that the Chairperson of the Off-Cycle group, Ms. J. Armstrong (United States of America) had departed for early retirement at the end of 2003. The GRPE Chairman acknowledged the high expertise of her contributions to GRPE work. He welcomed Ms. M. Delaney (United States of America), who accepted to take over the function as Chairperson of the Off-Cycle group. She announced the group's intention to hold its next informal meeting on 22 March 2004 in London. The Chairman suggested that the Off-Cycle emissions group should also meet again before the forty-eighth session of GRPE (para. 46 below).

1.3. World-Wide Harmonized Heavy-Duty OBD group (WWH-OBD)

10. The Chairman of the WWH-OBD working group, Mr. M. Odaka (Japan), reported on the results of the fifth and sixth meeting, held in Windsor and Tokyo, as well as the outcome of the seventh meeting held prior to the GRPE session, on 13 January 2004 (para. 4). He informed GRPE that all the working papers of the working group could be consulted and downloaded from the OICA website at the following address: <http://www.oica.net/htdocs/main.htm>. Mr. Odaka pointed out the group's dilemma on the introduction of OBD threshold limits and on the structure of the draft gtr. He asked GRPE for guidance on that subject and recalled the eventual impact on the timetable of the development work. He also announced the group's intention to meet again on 23 and 24 March 2004 in London (United Kingdom) and prior to the forty-eighth GRPE session in Geneva (para. 46 below).

11. The GRPE Chairman thanked the WWH-OBD group for the progress made and confirmed the decision taken by AC.3 that the informal group should also take into account the use of OBD systems in other fields than the control of pollutants emissions (see report TRANS/WP.29/953, para. 148). The expert from the United Kingdom stressed the need of having a flexible structure of a gtr in order to permit easily further extensions to the gtr. He volunteered to provide some guidelines for the structure of such a gtr at the next informal meeting in London. Following the discussion on threshold limits, GRPE agreed to resume consideration of this subject at the next GRPE session.

#### PARTICULATE MEASUREMENT PROGRAMME (PMP)

Documentation: Informal document No. GRPE-47-22 of annex 1 to this report.

12. The Chairman of the PMP informal group, Mr. M. Dunne (United Kingdom), introduced the report of the special informal meeting of GRPE, held in Geneva on 15 September 2003 (informal document No. GRPE-47-22). He pointed out his intention to set up a drafting group in order to finalize the text for consideration at the next GRPE session in June 2004. Concluding his report, he welcomed the support by the Joint Research Center (JRC) of the European Commission to perform an "inter-laboratorial" investigation on the proposed measurement system and numbering system. GRPE noted that Mr. B. Frost, Secretary of the PMP informal group, was taking other responsibilities within the Department of Transport and would no longer be in a position to assure the secretariat of the PMP informal group. The GRPE Chairman and all the experts thanked Mr. Frost for his assistance and considerable efforts provided to the group during all the years and wished him, further on, good success in his new position.

13. Recalling his presentation at the last GRPE session, the expert from OICA expressed his regret that Governments did not comment their reports. He stressed the need that the proposals worked out by the PMP and WHDC informal groups should be aligned. Furthermore, he underlined the crucial condition, that the round robin tests could only be launched in different laboratories, if the validation of the test procedure has been concluded.

14. Following the discussion, GRPE agreed to resume consideration of this subject at its next session, on the basis of the final draft proposal by the United Kingdom and awaiting the results of the "inter-laboratorial" investigation programme and the round robin tests. He suggested that the PMP group should also meet again before the forty-eighth session of GRPE (para. 46 below).

#### 3. DEVELOPMENT OF A WORLDWIDE MOTORCYCLE EMISSION TEST CYCLE (WMTC)

15. The Chairman of the WMTC working group, Mr. C. Albus (Germany), briefed GRPE about the work of the eleventh WMTC-FE expert meetings on 24 and 25 November 2003 in Ispra (Italy). He reported on the main outstanding issues and the results of the round robin tests. He announced that the technical report and a new version of the draft gtr was being circulated via email by the end of January 2004 and stated his intention to finalize both documents as official working documents for consideration at the forty-eighth GRPE session in June 2004. For that purpose, he requested all experts to send their comments to the Secretary of the WMTC working group (erwin.segers@honda-eu.com) before the end of February 2004.

16. The Chairman of GRPE expressed his thanks for the contributions and the good progress made by the group. GRPE agreed to resume consideration of this subject at the next session of GRPE in June 2004 on the basis of the technical report and the proposal for a draft gtr.

4. EXHAUST EMISSION TEST PROTOCOL OF NON-ROAD MOBILE MACHINERY (NRMM)

Documentation: Informal documents Nos. GRPE-47-1, GRPE-47-7 and GRPE-47-25 of annex 1 to this report.

17. Recalling the working programme to develop a gtr on the exhaust-emissions of non-road mobile machinery, the Chairman of the NRMM working group, Mr. G. de Santi (European Commission), introduced informal document No. GRPE-47-1. He reported on the results of the second informal meeting held in Ann Arbor (United States of America) on 12 September 2003 (see informal document No. GRPE-47-7) and the third informal meeting held prior to the GRPE session, on 12 January 2004 (see para. 2 and informal document No. GRPE-47-25). He briefed GRPE on the group's efforts to compare regulations applied in the different regions and its decision for the future work. He also pointed out the recent developments regarding the legislation on NRMM and underlined that an amendment to EU Directive 97/68/EC regarding non-road mobile machinery emissions has recently been adopted by the EU Member States.

18. The GRPE Chairman thanked the group for the work done and suggested to resume consideration at the next meetings, scheduled to be held on 23 April 2004 in Ispra (Italy) and during the forty-eighth GRPE session in June 2004 (para. 46 below).

5. AMENDMENTS TO ECE REGULATIONS

5.1. Regulation No. 67 (Equipment for liquefied petroleum gas)

Documentation: TRANS/WP.29/GRPE/2004/4; informal documents Nos. GRPE-47-12 and GRPE-47-21 of annex 1 to this report.

19. The expert from the Netherlands introduced informal document No. GRPE-47-21 proposing an amendment to TRANS/WP.29/GRPE/2004/4 (tabled by Germany) regarding the increase of the maximum outer diameter of the gas tubes in order to reduce the time for the refilling of gas containers for buses. The expert from the United Kingdom preferred to keep the existing text of the Regulation. The expert from Germany supported the proposal by the Netherlands.

20. Following the discussion, GRPE adopted TRANS/WP.29/GRPE/2004/4, with the following amendment to paragraph 17.7.3.:

"17.7.3. The outer diameter **of gas tubes made of copper shall not exceed 12 mm with a wall thickness of at least 0.8 mm, gas tubes from steel and stainless steel shall not exceed 25 mm with a, for gas services, appropriate wall thickness.**"

21. The secretariat was requested to submit the document, as amended above, to WP.29 and AC.1, as a proposal for draft Supplement 4 to the 01 series of amendments to Regulation No. 67, for consideration at their June 2004 sessions.

22. The expert from the Netherlands introduced informal document No. GRPE-47-12 proposing new provisions to improve the bonfire test requirements for LPG containers. GRPE welcomed the proposal and agreed to resume its consideration at its forty-eighth GRPE session. For that purpose, the secretariat was requested to distribute informal document No. GRPE-47-12 with an official symbol (note by the secretariat: see TRANS/WP.29/GRPE/2004/7).

5.2. Regulation No. 83 (Emissions of M1 and N1 categories of vehicles)

Documentation: TRANS/WP.29/GRPE/2004/5, informal documents Nos. GRPE-47-10 and GRPE-47-18 of annex 1 to this report.

23. With regard to TRANS/WP.29/GRPE/2004/5 concerning some corrections to the 05 series of amendments to Regulation No. 83, the expert from the Russian Federation presented informal document No. GRPE-47-10. The expert from Germany introduced informal document No. GRPE-47-18 proposing some additional corrections to the Regulation. The expert from Poland raised his concern about the definition of quadricycles and volunteered to transmit his comments to the secretariat in order to align the provisions of Regulation No. 83 with those of the European Union Directive 70/220/EEC.

24. GRPE adopted TRANS/WP.29/GRPE/2004/5, as amended in annex 2 to this report, and requested the secretariat to submit it to WP.29 and AC.1, regarding paragraphs. 1.1.3., 1.1.5. and 1.2. as a proposal for draft Supplement 5 and the rest as a proposal for draft Corrigendum 3 to the 05 series of amendments to Regulation No. 83, for consideration at their June 2004 sessions.

5.3. Regulation No. 101 (Emissions of carbon dioxide and fuel consumption)

Documentation: TRANS/WP.29/GRPE/2004/2.

25. The expert from France introduced TRANS/WP.29/GRPE/2004/2, proposing new provisions for the type approval of hybrid vehicles. GRPE adopted the document and requested the secretariat to submit it, as a proposal for draft Supplement 7 to Regulation No. 101, to WP.29 and AC.1 for consideration at their June 2004 sessions.

6. REPLACEMENT CATALYTIC CONVERTERS FOR VEHICLES WITH OBD

26. GRPE agreed to consider this subject together with agenda item 11.2. (para. 44).

7. APPLICATION OF ECE REGULATIONS TO HYBRID VEHICLES

Documentation: Informal documents Nos. GRPE-47-15 and GRPE-47-16 of annex 1 to this report.

27. The Chairperson of the informal group on hybrid vehicles, Mrs. B. Lopez (France), informed GRPE on the status of the group's work to include new provisions for the type approval of hybrid vehicles and introduced informal documents Nos. GRPE-47-15 and GRPE-47-16, proposing draft amendments to Regulation Nos. 24 (visible pollutants) and 85 (measurement of net power).

28. The Chairman expressed his thanks for the good progress made by the informal group and suggested to resume consideration of this subject at the next GRPE session in June 2004 on the basis of official documents. For that purpose, the secretariat was requested to distribute informal documents Nos. GRPE-47-15 and GRPE-47-16 with official symbols (note by the secretariat: see TRANS/WP.29/GRPE/2004/8 and TRANS/WP.29/GRPE/2004/9).

## 8. HYDROGEN AND FUEL-CELL VEHICLES (HFCV)

Documentation: TRANS/WP.29/GRPE/2003/14 and Add.1, TRANS/WP.29/GRPE/2004/3; informal documents Nos. GRPE-47-2, GRPE-47-3, GRPE-47-5, GRPE-47-8, GRPE-47-20 and GRPE-47-24 of annex 1 to this report.

29. Mr. C. Albus (Germany), chairing the informal group on hydrogen and fuel-cell vehicles, reported on the outcome of the group's informal meeting prior to the GRPE session, on 12 January 2004 (para. 3). He informed GRPE on the status of both proposals for new draft Regulations on motor vehicles using liquid hydrogen (TRANS/WP.29/GRPE/2003/14 and Add.1) or compressed gaseous hydrogen (TRANS/WP.29/GRPE/2004/3). He introduced informal document No. GRPE-47-5 proposing some minor amendments to TRANS/WP.29/GRPE/2004/3.

30. Recalling the discussion at the previous GRPE session on a road map for the assessment of the hydrogen technologies for motor vehicles and the development of a gtr for hydrogen vehicles, Mr. Albus presented a draft action plan to develop such a gtr (informal document No. GRPE-47-24). He informed GRPE that different approaches have been discussed by the informal group and that two options have been identified (option 1: focus directly on gtr development under the 1998 Agreement and option 3: adoption of both draft Regulations under the 1958 Agreement and the parallel development of a related gtr). Option 2 from the informal document was not considered to be a suitable option. Mr. Albus mentioned that no consensus has been reached in the informal group and requested the advice of GRPE. He briefed GRPE on the outlook of the informal group's work and raised some open questions on the sponsorship of the gtr, its scope, the necessary research programmes and the time schedule. He announced the group's intention to meet again on 22 and 23 April 2004 in Washington D.C. (United States of America).

31. Referring to informal document No. GRPE-47-24, the expert from the United States of America pointed out that the scope of draft proposals TRANS/WP.29/GRPE/2003/13 and TRANS/WP.29/GRPE/2004/3 was limited to components used for the storage and transfer of hydrogen to the fuel cell system or internal combustion engine as well as to their installation on the vehicle. He presented his position as drafted in annex B2 to the afore-mentioned informal document and stressed the need to develop directly a gtr (option 1) on safety performance and integrity of all the individual components as well as of the whole vehicle, even under extreme conditions or situations, such as crashes and head on collisions. He outlined that this option would require the achievement of some milestones on that field, such as the evaluation, verification and validation of the most recent research data, the coordination of safety aspects with other subsidiary bodies of WP.29 (GRSP and GRSG), the drafting of a cost-benefit analysis, etc.

32. The expert from Japan introduced informal document No. GRPE-47-8 concerning technical guidance for safety and environment of fuel cell vehicles. With regard to the new draft Regulations on hydrogen under the 1958 Agreement, he raised his concern that the adoption of both proposals would restrict the future development of new hydrogen technologies. Referring to

annex B1 of informal document No. GRPE-47-24, he expressed his preference for option 1. He pointed out that the 1958 Agreement was no longer an European agreement, but an international one, and that any purely European interim solution should be considered in the European Union legal framework before the adoption of the gtr.

33. The expert from the European Commission presented the EC statement on hydrogen and the need of efficient and affordable energy carriers and systems (informal document No. GRPE-47-24). He stated that the ultimate goal should be the development of a gtr. He suggested to adopt in a first step under the 1958 Agreement both draft Regulations, with a limited life, dealing with vehicle approvals concerning hydrogen storage, and to continue in parallel the development of a gtr. This option would avoid the elaboration of interim national/regional legislation in some countries. Most informal group members supported this approach, including Canada, Germany, the Netherlands, Norway, ENGVA, ISO and OICA.

34. The Chairman expressed his thanks to the informal group for the good progress made and suggested to seek advice from WP.29 regarding both retained options for the road map on the development of a gtr on hydrogen and fuel cell vehicles. He requested all experts to inform their representatives of WP.29 about the outcome of this discussion. He recalled the high importance of this subject and recommended the informal group to continue, in the meantime, its work on both proposals, awaiting the decision by WP.29 in June 2004. GRPE agreed to resume consideration of this subject at its forty-eighth session, including the discussion on the road map for a gtr (see para. 46). For that purpose, the secretariat was requested to distribute informal document No. GRPE-47-5 with an official symbol (note by the secretariat: see TRANS/WP.29/GRPE/2004/3/Add.1).

35. The expert from ENGVA gave a presentation (informal documents Nos. GRPE-47-2 and GRPE-47-3) on the crucial need to harmonize the gaseous fuel standards in order to facilitate the development of related equipment, its approval and commercialization. He added that a standard harmonization of the concerned equipment would improve the safety performance and reduce the costs at the same time. He raised the question if WP.29 or UNECE could take the leadership of this world-wide harmonization of gaseous fuel standards.

36. The GRPE Chairman welcomed that contribution and invited the expert from ENGVA to give a presentation at the next WP.29 session in March 2004.

## 9. ENVIRONMENTALLY FRIENDLY VEHICLES (EFVs)

Documentation: Informal document No. GRPE-47-9 of annex 1 to this report.

37. The expert from Japan gave a presentation regarding the Japanese promotion project on the development of the next-generation Environmentally Friendly Vehicles (informal document No. GRPE-47-9). The expert from ENGVA welcomed the initiative by Japan to develop new standards on safety and environmental protection.

38. The experts from the European Commission and the United States of America agreed on the high importance of this subject and acknowledged the leading position of Japan in this sector. The GRPE Chairman expressed his thanks for the presentation and stated his intention to confirm to WP.29 that WP.29/GRPE should be the main fora for the development of new technologies in

the field of EFVs. GRPE agreed to maintain this agenda item and to resume consideration of this subject at its next session, on the basis of results by Japan and a concrete proposal, if available.

#### 10. EXCHANGE OF INFORMATION ON NATIONAL AND INTERNATIONAL REQUIREMENTS ON EMISSIONS

Documentation: Informal documents Nos. GRPE-47-13 and GRPE-47-17 of annex 1 to this report.

39. The expert from the United States of America informed GRPE that the US Environmental Protection Agency has recently adopted more stringent emission standards for new highway motorcycles (informal document No. GRPE-47-13).

40. The expert from the Switzerland presented informal document No. GRPE-47-17 regarding a national proposal for regulatory provisions to reduce diesel particle emissions of new vehicles in Switzerland. He stated that the outcome of the deliberations was expected by the middle of this year and volunteered to keep GRPE informed.

#### 11. OTHER BUSINESS

##### 11.1. Regulation No. 115 (Specific LPG and CNG retrofit systems)

Documentation: Informal documents Nos. GRPE-47-4 and GRPE-47-6 of annex 1 to this report.

41. The expert from AEGPL introduced informal document GRPE-47-6 proposing draft amendments to the Regulation in order to adapt its provisions mainly to the technical progress and to clarify the responsibilities of component manufacturers and fitters. The expert from Italy supported the proposal by AEGPL. The experts from France, the Netherlands and OICA raised study reservations on that document. The expert from AEGPL volunteered to organize in the near future a special informal meeting for the examination of the concerned document and invited all interested experts to participate in that meeting.

42. The expert from India informed GRPE that the Asian countries have a large number of three wheelers and that his Government had adopted a national regulation for CNG/LPG retrofit systems for this category of vehicles. As Regulation No. 115 applies only for vehicles of categories M and N, he requested that its scope should be extended to three-wheelers. Furthermore, he raised his concern, amongst others, about the petrol tank capacity limitation and the dual-fuel retrofit systems (informal document No. GRPE-47-4).

43. Following the discussion, GRPE agreed to resume consideration of this subject at its next session in June 2004, on the basis of a common proposal by India and AEGPL.

##### 11.2. Regulation No. 103 (Replacement catalytic converters)

Documentation: TRANS/WP.29/GRPE/2003/18; TRANS/WP.29/2003/76; informal documents Nos. GRPE-47-11 and GRPE-47-23 of annex 1 to this report.

44. Recalling the adoption of TRANS/WP.29/GRPE/2003/18 at the previous GRPE session, the expert from OICA informed GRPE that WP.29 had referred back to the related document

TRANS/WP.29/2003/76 at its one-hundred-and-thirty-first session. He stressed the need to include into the Regulation exemptions for replacement catalytic converters (see informal document No. GRPE-47-11) from the component type approval requirements under certain conditions (analogue to those exemptions of the European Union Directive 70/220/EC, as amended by 2003/76/EC). With regard to that request, the expert from the European Commission introduced informal document No. GRPE-47-23. GRPE agreed on that proposal and requested the secretariat to transmit the adopted amendments, as reproduced in annex 3 to this report, as a corrigendum to TRANS/WP.29/2003/76, for consideration to WP.29 and AC.1 at their June 2004 sessions (TRANS/WP.29/2003/76/Corr.1).

11.3. Tributes to Ms. J. Armstrong (United States of America), Mr. F. Behrens (OICA) and Mr. G. Sturdza (AIT/FIA)

45. The Chairman informed GRPE that Ms. Jane Armstrong, Chairperson of the Off-Cycle emissions working group, was departing at her own request for an early retirement at the end of 2003 (para. 9). GRPE acknowledged that she had contributed considerably to enhancing vehicles emissions reduction and thanked her. GRPE also noted that Mr. F. Behrens (OICA) and Mr. G. Sturdza (AIT/FIA) have decided to take their merited retirement. The Chairman thanked them all for their excellent contributions and technical expertise during all the years of participation in GRPE and wished them a long a happy retirement. GRPE expressed its appreciation to all of them with long applause.

AGENDA FOR THE NEXT SESSION

46. For the forty-eighth session of GRPE to be held in Geneva, Palais des Nations, GRPE decided to start on Tuesday, 1 June 2004, 09.30 h until Friday, 4 June 2004, 17.30 h. For that purpose, the secretariat suggested the following agenda:

(a) Informal meeting of the GRPE Particle Measurement Programme (PMP)

To be held on Tuesday morning, 1 June 2004, from 09.30 h till 12.30 h. The agenda of the meeting will be prepared by the PMP secretariat and distributed to the members of the group prior to the meeting. Note by the secretariat: This meeting will be held without interpretation.

(b) Informal meeting of the GRPE working group on Off-Cycle emissions (Off-Cycle)

To be held on Tuesday afternoon, 1 June 2004, from 14.30 h till 17.30 h. The agenda of the meeting will be prepared by the Off-Cycle secretariat and distributed to the members of the group prior to the meeting.

(c) Informal meeting of the GRPE working group on world-wide harmonized heavy-duty on-board diagnostics (WWH-OBD)

To be held on Wednesday morning, 2 June 2004, from 09.30 h till 17.30 h. The agenda of the meeting will be prepared by the WWH-OBD secretariat and distributed to the members of the group prior to the meeting. Note by the secretariat: The drafting committee of the WWH-OBD informal group will be held on Wednesday afternoon, 2 June 2004, at the ISO Central Secretariat, 1 rue de Varembé, Geneva.

(d) Informal meeting of the GRPE working group on Hydrogen and Fuel Cell Vehicles (HFCV)

To be held on Wednesday afternoon, 2 June 2004, from 14.30 h till 17.30 h. The agenda of the meeting will be prepared by the HFCV group secretariat and distributed to the members of the group prior to the meeting.

(e) Forty-eighth session of the GRPE proper

To be held Thursday, 3 June 2004, from 09.30 h to Friday, 4 June 2004, until 12.30 h 2/:

1. Regulation No. 49 (Emissions of C.I., NG, and P.I. (LPG) engines)
- 1.1. World-wide heavy-duty certification procedure (WHDC)
- 1.2. Off-Cycle emissions
- 1.3. On-board diagnostics for heavy-duty vehicles (WWH-OBD)
2. Particle Measurement Programme (PMP)
3. Development of a worldwide motorcycle emission test cycle (WMTC)
4. Exhaust emissions test protocol of Non-Road Mobile Machinery (NRMM)
5. Amendments to ECE Regulations
- 5.1. Regulation No. 67 (Equipment for liquefied petroleum gas)
- 5.2. Regulation No. 115 (specific LPG and CNG retrofit systems)
6. Application of ECE Regulations to hybrid vehicles
7. Hydrogen and Fuel Cell Vehicles (HFCV)
8. Environmentally Friendly Vehicles
9. Exchange of information on national and international requirements on emissions 3/
10. 1997 Agreement (Rule No. 1)
11. Election of officers
12. Other business

(f) Informal meeting of the GRPE working group on the emissions of non-road mobile machinery (NRMM)

To be held on Friday afternoon, 4 June 2004, from 14.30 h till 17.30 h. The agenda of the meeting will be prepared by the NRMM group secretariat and distributed to the members of the group prior to the meeting. Note by the secretariat: This meeting will be held without interpretation.

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2/ As part of the secretariat's efforts to reduce expenditure, all the official documents as well as the informal documents distributed prior to the session, by mail or placed on the UNECE WP.29 website, will not be available in the conference room for distribution to session participants. Delegates are kindly requested to bring their copies of documents to the meeting. (The WP.29 website address is: <http://www.unece.org/trans/main/welcwp29.htm> select GRPE and find "working documents" as well as "informal documents").

3/ Delegations are invited to submit brief written statements on the latest status in national requirements and, if necessary, to supplement this information orally.

Annex 1LIST OF INFORMAL DOCUMENTS DISTRIBUTED WITHOUT A SYMBOL  
DURING THE SESSION

No.	Transmitted by	Agenda item	Language	Title	Follow-up
1.	European Commission	4.	E	Working programme for GRPE working group on non-road mobile machinery (NRMM)	(a)
2.	ENGVA	8.	E	Harmonization of gaseous fuel standards	(a)
3.	ENGVA	8.	E	Standards harmonization at international level: Paving the pathway for commercialisation	(a)
4.	India	11.1.	E	Observations on Regulation No. 115	(a)
5.	Germany	8.	E	Amendments to the new draft Regulation on vehicles using compressed gaseous hydrogen	(b)
6.	AEGPL	11.1.	E	Draft amendment to Regulation No. 115: "LPG/GNG retrofit equipment"	(a)
7.	European Commission	4.	E	Minutes of the NRMM meeting in Ann Arbor on 12 September 2003	(a)
8.	Japan	8.	E	Technical guidance for safety and environment of fuel cell vehicles which are run on public road under the approval of the Minister of Land, Infrastructure and Transport	(a)
9.	Japan	9.	E	Outline of next-generation environmentally friendly vehicles (EVF) development promotion project	(a)
10.	Russian Federation	5.2.	E/R	Proposal for a corrigendum 3 to the 05 series of amendments to Regulation No. 83, including draft supplement 3 and draft supplement 4	(d)
11.	OICA	11.2.	E	Proposal for draft supplement 2 to Regulation No. 103 (replacement catalytic converters)	(a)
12.	Netherlands	5.1.	E	Proposal for amendments to Regulation No. 67 (LPG) to improve the bonfire test requirements	(b)
13.	USA	10.	E	EPA finalizes emission standards for new highway motorcycles	(a)
14.	OICA	1.1.	E	Worldwide Harmonized Heavy-Duty Emission Certification Procedure: Draft global technical regulation (gtr)	(a)
15.	France	7.	E	Draft proposal for amendments to Regulation No. 24	(b)

No.	Transmitted by	Agenda item	Language	Title	Follow-up
16.	France	7.	E	Draft proposal for amendments to Regulation No. 85	(b)
17.	Switzerland	10.	E	Information on a national proposal for regulatory provisions to cut down diesel particle emissions in Switzerland	(a)
18.	Germany	5.2.	E	Proposal for a corrigendum 3 to the 05 series of amendments to Regulation No. 83	(d)
19.	European Commission	1.1.	E	Proposal to develop a global technical regulation: Heavy-duty vehicle exhaust-emission type-approval/certification procedure	(f)
20.	European Commission	8.	E	EC statement on hydrogen	(a)
21.	Netherlands	5.1.	E	Proposal for amendments to document TRANS/WP.29/GRPE/2004/4	(d)
22.	United Kingdom	2.	E	Report of the Working Party on Pollution and Energy (GRPE): Special informal meeting (15 September 2003)	(a)
23.	European Commission	11.2.	E	Draft supplement 2 to ECE Regulation No. 103	(d)
24.	Germany	8.	E	Draft action plan to develop Hydrogen / Fuel cell gtr(s)	(a)
25.	European Commission	4.	E	NRMM: Minutes of the meeting in Geneva on 12 January 2004	(a)

Notes:

- (a) Consideration completed or to be superseded
  - (b) Continue consideration at the next session with an official symbol
  - (c) Continue consideration at the next session as an informal document
  - (d) Adopted
  - (e) To be transmitted to WP.29/AC.1
  - (f) To be transmitted to WP.29/AC.3
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Annex 2

AMENDMENTS TO TRANS/WP.29/GRPE/2004/5 (based on informal documents Nos. GRPE-47-10 and GRPE-47-18 as well as on the written comments by Poland) ADOPTED BY GRPE AT ITS FORTY-SEVENTH SESSION (see para. 24 of this report)

Paragraph 1.1.3., amend to read:

- "1.1.3. It does not apply to:
- vehicles with a maximum mass of less than 400 kg and **to vehicles** having a maximum design speed of less than 50 km/h;
  - **vehicles whose unladen mass is not more than 400 kg if they are intended for carrying passengers or 550 kg if they are intended for carrying goods and whose maximum engine power does not exceed 15 kW.**"

Paragraph 1.1.5., amend to read:

- "1.1.5. **Vehicles of category N1 [equipped with compression-ignition engines or equipped with positive-ignition engines fuelled with NG or LPG] are not subject to this Regulation provided they have been type-approved pursuant to Regulation 49 [as amended by the last series of amendments].**"

Paragraph 1.2., amend to read:

- "1.2. This Regulation does not apply to vehicles equipped with positive-ignition engines fuelled with **NG or LPG** used for driving motor vehicles **of M1 category having a maximum mass exceeding 3500 kg, M2, M3, N2, N3** [to which Regulation No. 49 is applicable]."

Paragraph 2.19.2., correct to read (deletion of the words "crankcase emissions"):

- "2.19.2. Limitation of emissions of gaseous and particulate pollutants, durability of pollution control devices and on-board diagnostics of vehicles fuelled with diesel fuel (Approval C)".

Paragraph 3.1., correct to read (second subparagraph should be deleted):

- "3.1. The application for approval of a vehicle type with regard to exhaust emissions, crankcase emissions, evaporative emissions and durability of pollution control devices, as well as to its on-board diagnostic (OBD) system shall be submitted by the vehicle manufacturer or by his authorized representative."

Insert a new paragraph 5.3.8., to read:

**"5.3.8. OBD - test**

**This test shall be carried out on all vehicles referred to in paragraph 1. The test procedure described in annex 11, paragraph 3. shall be followed."**

Annex 1, paragraphs 4.2.13.2. and 4.2.13.3.1, correct the figure "LPG" to read "NG".

Annex 4,

Appendix 1, the note 1 to table 1.3, correct to read:

"(1) PM = gearbox on neutral, clutch engaged  
K<sub>1</sub>, K<sub>5</sub> = first or **fifth** gear engaged, clutch disengaged"

Appendix 5, paragraph 1.1., correct to read (deletion of the reference to paragraph 3.3.):

".....  
The devices described in paragraphs **3.1. and 3.2.** shall be deemed ....."

Appendix 5, paragraph 2.3.4.1.4., should be deleted.

Appendix 5, paragraphs 3.1.4. and 3.2.4., correct to read:

".....  
S<sub>3</sub> is a **hydrocarbon** sampling point  
....."

Annex 11, paragraph 4.2., correct to read:

"4.2. ....  
..... effective in complying with the requirements of this **Regulation** and that the manufacturer has ....."

Annex 11, appendix 1, paragraph 1, correct to read:

"1. INTRODUCTION

This appendix describes the procedure of the test according to paragraph **3.** of annex 11. The procedure .....

....."

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Annex 3

AMENDMENTS TO TRANS/WP.29/2003/76 (based on informal document No. GRPE-47-23)  
ADOPTED BY GRPE AT ITS FORTY-SEVENTH SESSION (see para. 44 of this report)

Inserted new paragraph 3.2.5., correct to read:

"3.2.5. Indication if the replacement catalytic converter is intended to be compatible with OBD requirements."

Inserted new paragraph 4.2., correct to read:

"4.2. Original replacement catalytic converters, which are of a type covered by paragraph 18. of Annex 2 of Regulation No. 83 and are intended for fitment to a vehicle to which the relevant type-approval document refers, do not need to **be approved according to** this Regulation provided they fulfil the requirements of paragraphs 4.2.1. and 4.2.2."

Renumbered paragraph 4.3., correct to read:

"4.3. An approval number shall be assigned to each **replacement** catalytic converter type approved. Its first two digits (00 for the Regulation in its present form) shall indicate the series of amendments incorporating the most recent major technical amendments made to the Regulation at the time of issue of the approval. The same Contracting Party may not assign the same number to another type of replacement catalytic converter. The same approval number may cover the use of that replacement catalytic converter type on a number of different vehicle types."

Annex 1, item 4., correct to read:

"4. Type and commercial designation of the replacement catalytic converter:"

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