



## Economic and Social Council

Distr.  
GENERAL

TRANS/WP.29/GRPE/44  
5 July 2002

Original: ENGLISH

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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-FOURTH SESSION \*/

(10 - 14 June 2002)

#### ATTENDANCE

1. GRPE held its forty-fourth session from 10 (afternoon only) to 14 June 2002, 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; Greece; Hungary; Italy; Japan; Netherlands; Norway; Poland; Russian Federation; South Africa; Spain; Sweden; Switzerland; United Kingdom; United States of America; Yugoslavia. 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); International Motorcycle Manufacturers Association (IMMA); European Association of Automotive Suppliers (CLEPA); 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 LPG Association (AEGPL); European Natural Gas Vehicle Association (ENGVA); European Committee of Associations of Manufacturers of Agricultural Machinery (CEMA). Experts from the Committee for European Construction Equipment (CECE) and from the Engine Manufacturers Association (EMA) participated at the invitation of the secretariat.

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\*/ Following the agreement reached at the forty-third session, the forty-fourth session of GRPE proper was preceded by four informal meetings (see TRANS/WP.29/GRPE/2002/8 and Add.1 and paras. 2-6 below).

2. The fifth informal meeting of the GRPE working group on the world-wide motorcycle emission test cycle (WMTC) was held on 10 June 2002 (afternoon only), under the chairmanship of Mr. C. Albus (Germany). Experts from the following countries and organizations participated in the work: Belgium, Canada; Czech Republic; Denmark; Finland; France; Germany; Hungary; Italy; Japan; Netherlands; Norway; Poland; Russian Federation; South Africa; Spain; Sweden; Switzerland; United Kingdom; United States of America; Yugoslavia; European Commission (EC); International Organization for Standardization (ISO); International Touring Alliance/International Automobile Federation (AIT/FIA); International Organization of Motor Vehicle Manufacturers (OICA); International Motorcycle Manufacturers Association (IMMA); Association for Emissions Control by Catalyst (AECC/CEFIC). A summary of the proceedings of this informal meeting is given below (paras. 23-24).

3. The third informal meeting of the GRPE Particle Measurement Programme (PMP) working group was held on 11 June 2002 (morning only) 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; Greece; Hungary; Italy; Japan; Netherlands; Norway; Poland; Russian Federation; South Africa; Spain; Sweden; Switzerland; United Kingdom; United States of America; Yugoslavia; European Commission (EC); International Organization for Standardization (ISO); International Touring Alliance /International Automobile Federation (AIT/FIA); International Organization of Motor Vehicle Manufacturers (OICA); International Motorcycle Manufacturers Association (IMMA); European Association of Automotive Suppliers (CLEPA); The Oil Companies' European Organization for Environment, Health and Safety (CONCAWE); Automobile Emissions Control by Catalysts (AECC/CEFIC); Engine Manufacturers Association (EMA). A summary of the proceedings of this informal meeting is given below (paras. 20-22).

4. The thirteenth informal meeting of the GRPE working group on the worldwide heavy-duty certification procedure (WHDC group) was held on 11 June 2002 (afternoon only), under the chairmanship of Mr. C. Havenith (Netherlands). Experts from the following countries and organizations participated in the work: Belgium; Canada; Czech Republic; Denmark; Finland; France; Germany; Hungary; Italy; Japan; Netherlands; Norway; Russian Federation; South Africa; Spain; Sweden; Switzerland; United Kingdom; United States of America; Yugoslavia; European Commission (EC); International Organization for Standardization (ISO); International Touring Alliance / International Automobile Federation (AIT/FIA); International Organization of Motor Vehicle Manufacturers (OICA); International Motorcycle Manufacturers Association (IMMA); The Oil Companies' European Organization for Environment, Health and Safety (CONCAWE); 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. 9-12).

5. The second informal meeting of the GRPE working group on Off-Cycle emissions (Off-cycle group), initially intended to be held on 12 June 2002 (morning only), was postponed to the next GRPE session in January 2003 in order to dedicate additional time to the WWH-OBD group. However, the Chairperson of the Off-Cycle group gave an interim report of the group activities (paras. 13-15).

6. The first informal meeting of the GRPE working group on world-wide harmonized heavy-duty vehicle on-board diagnostics (WWH-OBD group) was held

on 12 June 2002, under the chairmanship of Mr. M. Odaka (Japan). Experts from the following countries and organizations participated in the work: Belgium; Canada; Czech Republic; Denmark; Finland; France; Germany; Greece; Hungary; Italy; Japan; Netherlands; Norway; Poland; Russian Federation; South Africa; Spain; Sweden; Switzerland; United Kingdom; United States of America; Yugoslavia; European Commission (EC); International Organization for Standardization (ISO); International Organization of Motor Vehicle Manufacturers (OICA); Association for Emissions Control by Catalyst (AECC/CEFIC). A summary of the proceedings of this informal meeting is given below (paras. 16-19).

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

(a) Development of the emission testing procedure

Documentation: Informal document No. 1 of annex 1 to this report.

7. The expert from the Russian Federation introduced informal document No. 1 requesting transitional provision for the period between the dates of entry into force of new requirements and the cancellation of approvals issued pursuant to the previous level of requirements.

8. GRPE took note of the proposal and recalled the commitment to consider the matter, made both during the forty-third GRPE session and the one-hundred-and-twenty-sixth session of WP.29. The experts from France and Italy said that the solutions were under discussion and agreed to table a working document concerning this subject at the next session of GRPE.

(b) World-wide heavy-duty certification procedure (WHDC)

Documentation: Informal document No. 12 of annex 1 to this report.

9. The Chairman of the WHDC informal group, Mr. C. Havenith (Netherlands) briefed GRPE on the progress of work, as considered during the thirteenth informal meeting, in the afternoon of 11 June 2002 (para. 4 above). He recalled that the WHDC reference cycle development had been defined and, since then, Step 1 validation programme had been successfully concluded by the Swiss laboratory EMPA. The expert from EMPA presented the final report of validation step 1 of the research programme results (informal document No. 12). The Chairman confirmed that the work of the WHDC group had already progressed to Step 2 and the expert from Germany presented the results of the WHDC tests in Japan, US/EPA and at EMPA. With regard to the time schedule of the WHDC programme, Mr. Havenith stated that the results of the final tests would be available at the end of the year. Furthermore, he mentioned that the results of validation Step 2 as well as the draft proposal for the amendments to Regulation No. 49 would be available for the GRPE forty-fifth session in January 2003. He also reported that the round robin tests would start in spring 2003.

10. Concluding his report, the Chairman of WHDC announced that Mr. M. Biver, representing OICA and Secretary of the WHDC informal group, would retire at the end of October 2002 and that Mr. G. Margaria, representing ACEA and Secretary of the WHDC Fundamental Elements (FE) group, had already retired. He acknowledged Mr. M. Biver's and Mr. Margaria's fruitful contributions during all the years of their activities in GRPE and especially their time as

Secretary in the WHDC working groups, and wished both of them all the best for a happy and long retirement. He also welcomed Mr. J. Stein (OICA), who accepted to take over the function of Secretary of WHDC and its FE group.

11. Mr. Havenith also thanked the Governments and the industry for their commitment and financial support requesting, however, the Parties to be more active and encouraged wider cooperation.

12. The Chairman of GRPE thanked the WHDC group for the work done and suggested that the group should meet again before the forty-fifth session of GRPE in January 2003 (para. 70 below).

(c) Off-Cycle emissions (Off-Cycle)

13. The Chairperson of the Off-Cycle group, Ms. J. Armstrong (United States of America) briefed GRPE on the status of the Off-Cycles emissions project. She informed GRPE that the Off-Cycle group would resume its work on 8 November 2002 in Paris, at the occasion of the WWH-OBD informal meeting (see para. 18 below). GRPE was informed that Ms. J. Vardas (OICA) had agreed to serve as Secretary for the Off-Cycle group.

14. GRPE agreed the timetable of the Off-Cycle group and requested that the group should also meet in Geneva, prior to the next GRPE session in January 2003, using one half-day of the official session time, with the simultaneous interpretation (para. 70 below).

15. With regard to the list of priorities of the 1998 Global Agreement programme of work, which had been adopted by WP.29 at its one-hundred-and-twenty-sixth session (see TRANS/WP.29/841; para. 163 and annex 4), Ms. Armstrong accepted the GRPE's request to incorporate in the agenda of the Off-Cycle group also the item concerning particulate emissions of non-road mobile machinery.

(d) World-Wide Harmonized Heavy-Duty OBD group (WWH-OBD)

16. The Chairman of the WWH-OBD informal group, Mr. M. Odaka (Japan) briefed GRPE on the results of the preparatory meeting held on 22 February 2002 in Tokyo, of the intermediate meeting held on 15 May 2002 in California and also of the first informal meeting in Geneva prior to the GRPE session, in the morning and afternoon of 12 June 2002. He thanked the Chairwoman of the Off-Cycle group for giving the possibility to extend the WWH-OBD informal group meeting to one full day.

17. Mr. Odaka informed GRPE on the status of the working programme of the WWH-OBD group, especially with regard to the scope, definitions, malfunctions, thresholds and the OBD communication protocols and connectors.

18. With regard to the terms of reference of WWH-OBD, adopted by GRPE at its forty-third session, Mr. Odaka presented the time schedule of the group for achieving a first draft global technical regulation (gtr) in 2004. GRPE was informed that the WWH-OBD expert group would meet again on 6 and 7 November 2002 in Paris.

19. GRPE agreed the timetable of the WWH-OBD group. The Chairman of GRPE expressed appreciation for the progress made by the WWH-OBD group and

suggested that the group also meet in Geneva, before the forty-fifth session of GRPE (para. 70 below).

#### PARTICULATE MEASUREMENT PROGRAMME (PMP)

Documentation: Informal documents Nos. 5 and 15 of annex 1 to this report.

20. The Chairman of the PMP informal group, Mr. M. Dunne (United Kingdom), recalled the activities of the group and said that the PMP research group had met, since the last GRPE session, in London on 18 and 19 March 2002, and also just prior to the GRPE session, in the morning of 11 June 2002. The expert from the United Kingdom introduced to GRPE the results of the Phase I Report on the Particle Measurement Programme (informal document No. 5). The intensive work in Phase II on the methodology of the Particle Measurement Programme had produced its results and the PMP group expected to conclude Phase II in the near future. The report on Phase II would be presented to GRPE at its next session in January 2003.

21. The Chairman of GRPE thanked the PMP group for the work done and suggested that the next meeting of the PMP group should be scheduled before the forty-fifth session of GRPE, using one half-day of the official session time, with simultaneous interpretation (para. 70 below).

22. The expert from Norway introduced informal document No. 15, an analysis of tailpipe exhaust emissions from six modern diesel passenger cars in demanding conditions. GRPE acknowledged the valuable contribution and noted that the full report was available as informal document No. 15 on the web site of GRPE.

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

Documentation: Informal document No. 17 of annex 1 to this report.

23. The Chairman of the WMTC working group, Mr. C. Albus (Germany), informed GRPE about the results of the WMTC expert meeting in Tokyo (17 to 19 April 2002), and also of the informal meeting prior to the GRPE session, in the afternoon of 10 June 2002 (para. 2 above). The expert from Germany introduced informal document No. 17 containing the status report of the WMTC group and the comparison of the results of the WMTC cycle with the cycles of ECE-TRIAS, US-FTP and NEDC. Mr. Albus stated that the WMTC group had considered the issues that remained to be solved. He presented shortly the timetable of the WMTC work. The complete WMTC report to GRPE would include all relevant development steps, the validation test results and a proposal for a certification procedure. This report is expected to be made available to GRPE for consideration at its forty-fifth session, in January 2003. GRPE was informed that the WMTC expert group would meet again on 22 and 23 October 2002, in Ann Arbor (MI, United States of America). Completing his report, Mr. Albus acknowledged the support of ISO during the above-mentioned work. He also thanked Mr. Havenith, the former Chairman of the WMTC group, for his assistance and valuable contribution.

24. The Chairman of GRPE acknowledged the progress made by the group. Expecting the presentation of the WMTC report, GRPE agreed on the timetable and suggested that the WMTC group should meet prior to the forty-fifth session of GRPE, using one half-day of the official session time, with simultaneous interpretation (para. 70 below).

AMENDMENTS TO ECE REGULATIONS

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

Documentation: TRANS/WP.29/GRPE/2002/1; TRANS/WP.29/GRPE/2002/10;  
TRANS/WP.29/GRPE/2002/11; TRANS/WP.29/2001/61; informal documents Nos. 10,  
18, 19 and 21 of annex 1 to this report.

25. The expert from the Netherlands informed GRPE about the status of documents. He introduced informal document No. 21, tabled jointly with Italy and proposing amendments to the Regulation concerning provisions to improve the safety of the 80 per cent stop valve and introducing a new test on the compatibility of non-metallic materials with heat exchange fluids. He said that the text was a revised proposal of TRANS/WP.29/GRPE/2002/10 and included provisions of informal document No. 10 (tabled by Italy) and informal document No. 19 (tabled by the Netherlands). Furthermore, the expert from the Netherlands recalled his proposal tabled during the forty-second and forty-third GRPE sessions concerning specific test requirements related to the safety of all-composite containers (TRANS/WP.29/GRPE/2002/1). The proposal by CLEPA (TRANS/WP.29/GRPE/2002/11) was intended to introduce some editorial changes in order to allow an alternative architecture of the couplings, designed as a quick-connector type with a view to making the assembling operations easier and safer.

26. The expert from OICA supported informal document No. 21 in principle, but said that further consideration was desirable and proposed to postpone the adoption to the next GRPE session in January 2003.

27. The expert from France requested to postpone the adoption of TRANS/WP.29/GRPE/2002/1 to the next GRPE session, as its verification was still in under way. However, the expert from Netherlands, supported by the expert from Italy, requested GRPE to proceed faster, adopt the documents in the forty-fourth session and submit the proposals for consideration to WP.29 and AC.2 already at their sessions of November 2002. As no other delegation supported the position of the expert from France, GRPE adopted documents TRANS/WP.29/GRPE/2002/1 and TRANS/WP.29/GRPE/2002/11.

28. GRPE also adopted TRANS/WP.29/GRPE/2002/10 as amended by informal document No. 21, and as reproduced in annex 2 to this report.

29. GRPE requested the secretariat to transmit the three adopted documents (paras. 27-28), as a proposal for draft Supplement 3 to the 01 series of amendments to Regulation No. 67, to WP.29 and AC.1 for consideration at their November 2002 sessions.

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

Documentation: TRANS/WP.29/GRPE/2002/13; TRANS/WP.29/GRPE/2002/14; TRANS/WP.29/GRPE/2002/15; informal documents Nos. 2 and 3 of annex 1 of this report.

30. The expert from the Russian Federation introduced informal document No. 2; as the concerns were the same as mentioned for Regulation No. 49, GRPE noted the same conclusions (paras. 7-8 above).

31. The expert from Norway introduced informal document No. 3 proposing to align provisions of the Regulation with those of European Union Directive 2001/100/EC. He also proposed to amend paragraph 5.3.5.1. of that informal document as follows (deletion of the words "Class I"):

"5.3.5.1. This test shall be carried out on all M<sub>1</sub> and N<sub>1</sub> vehicles equipped with a positive-ignition engine."

32. The expert from the European Commission supported the amendments proposed by Norway.

33. GRPE adopted TRANS/WP.29/GRPE/2002/13, TRANS/WP.29/GRPE/2002/14 and TRANS/WP.29/GRPE/2002/15 with the amendments proposed in informal document No. 3, as modified above, and agreed on a final consideration at the next GRPE session.

34. For that purpose, the European Commission was requested to transmit to the secretariat a consolidated document, as a proposal for draft Supplement 3 (or draft Corrigendum 2) to the 05 series of amendments to Regulation No. 83, intended to be transmitted after final review, for consideration to WP.29 and AC.1 at their June 2003 sessions.

(c) Regulation No. 101 (Emissions of carbon dioxide and fuel consumption of M1 and N1 vehicles)

Documentation: TRANS/WP.29/2002/39.

35. The expert from the European Commission confirmed that document TRANS/WP.29/2002/39 was acceptable to the European Union Member States.

36. As the aforementioned document was on the provisional agenda (item 4.2.17.) of WP.29 and AC.1 in their June 2002 sessions, GRPE concluded that it would hopefully be adopted.

(d) Regulation No. 103 (Replacement catalytic converters)

37. As the question concerning differing interpretation of requirements of ECE Regulations by approval authorities of various Contracting Parties was still under discussion in WP.29 and AC.1, the Chairman suggested to continue consideration of this issue at the next session of GRPE in January 2003.

(d) Regulation No. 110 (Specific components for CNG)

Documentation: TRANS/WP.29/GRPE/2001/7; TRANS/WP.29/GRPE/2002/5;  
TRANS/WP.29/GRPE/2002/6; TRANS/WP.29/GRPE/2002/7; TRANS/WP.29/GRPE/2002/12;  
informal documents Nos. 11 and 13 of annex 1 to this report.

38. The expert from Italy briefed GRPE on the status of the working documents and the informal documents. He stated that TRANS/WP.29/GRPE/2002/6, TRANS/WP.29/GRPE/2002/7, TRANS/WP.29/GRPE/2002/12 and informal document No. 11 were proposals for introducing editorial amendments or clarifying test requirements or marking of some specific components.

39. GRPE adopted TRANS/WP.29/GRPE/2002/12 and TRANS/WP.29/GRPE/2002/6 with the following amendment:

Paragraph 17.10.2., amend to read:

"17.10.2. Vehicles with more than one fuel system shall have a fuel selection system to ensure that no more than one fuel at the same time is supplied to the engine for more than 5 seconds. "Dual-fuel" vehicles, using diesel as the primary fuel for igniting the air/gas mixture, are allowed in cases where these engines and vehicles meet mandatory emission standards."

40. GRPE also adopted TRANS/WP.29/GRPE/2002/7 with the following amendments:

Annex 4B, paragraph 1.5.2.2., 2.5.2.2. and 3.5.2.2., amend to read:

"1.5.2.2. Test temperature: -40 °C ± 3 °C  
or -20 °C ± 3 °C, if applicable"

"2.5.2.2. Test temperature: -40 °C ± 3 °C  
or -20 °C ± 3 °C, if applicable"

"3.5.2.2. Test temperature: -40 °C ± 3 °C  
or -20 °C ± 3 °C, if applicable"

41. The secretariat was requested to prepare for the next GRPE session a consolidation of the documents adopted by GRPE (paras. 39-40) and to distribute informal document No. 11 with an official symbol.

42. TRANS/WP.29/GRPE/2002/5, tabled by ENGVA, was intended to clarify the provisions of the Regulation with regard to the gas/air mixer. However, the expert from the Netherlands rejected the provisions of paragraph 3.5.3.2., as too stringent. The experts from ENGVA and the Netherlands agreed to reconsider the matter at the next GRPE session.

43. The expert from ISO introduced informal document No. 13, comparing the provisions of Regulation No. 110 with the corresponding provisions of the ISO standards. The expert from ENGVA agreed to submit to GRPE for its next session a detailed proposal for amendments in order to align the Regulation with ISO standards.

44. The Chairman suggested having a final review of the documents at the next GRPE session in January 2003.



REPLACEMENT CATALYTIC CONVERTERS FOR VEHICLES WITH OBD

Documentation: Informal document No. 6 of annex 1 to this report.

45. This subject was not discussed (for the same reason as mentioned in para. 37) and GRPE agreed to resume its consideration at the forty-fifth GRPE session, in January 2003.

APPLICATION OF ECE REGULATIONS TO HYBRID VEHICLES

Documentation: TRANS/WP.29/GRPE/2002/9; Informal document No. 16 of annex 1 to this report.

46. The expert from France, Mrs. B. Lopez, chairing the informal group on hybrid vehicles, presented the status of the group's activities. She presented GRPE the results of the work by introducing informal document No. 16.

47. The expert from OICA supported informal document No. 16 and underlined the importance of this subject and the urgency for the European industry.

48. GRPE acknowledged the work done by the members of the group and its chairperson Mrs. Lopez, and agreed to continue considering this subject at the next GRPE session in January 2003. For that purpose, France was requested to include in the document the latest modifications and to transmit it in due time to the secretariat in order to distribute the document with an official symbol.

HYDROGEN-FUELLED VEHICLES

49. Mr. C. Albus (Germany), chairing the informal group, gave to GRPE a report on the group's activities and results of the last informal meeting. He pointed out that the group aimed to develop a proposal for either a new Regulation to the 1958 Agreement or a new candidate global technical regulation (gtr) under the 1998 Agreement. GRPE was informed that the informal group would meet again in November 2002. Mr. Albus stated that the group was expecting to transmit to the secretariat two proposals, for consideration as informal documents (electronic version only) at the GRPE session in January 2003. He also advised GRPE that the existing draft documents and information about the informal group could be consulted in the European Integrated Hydrogen Project (EIHP) website: <http://www.eihp.org>.

50. In relation to the list of priorities of the 1998 Global Agreement programme of work, which had been adopted by WP.29 at its one-hundred-and-twenty-sixth session (TRANS/WP.29/841, para. 163 and annex 4), Mr. Albus agreed, at the request of GRPE, to incorporate the item concerning fuel cells in the agenda of his informal group.

51. The Chairman of GRPE thanked the informal group and its Chairman for the cooperation and a good progress in the work.

POWER OF ENGINES INTENDED TO BE FITTED IN NON-ROAD MOBILE MACHINERY AND  
AGRICULTURAL TRACTORS

Documentation: TRANS/WP.29/GRPE/2001/4; TRANS/WP.29/GRPE/2001/4/Add.1;  
TRANS/WP.29/GRPE/2001/4/Add.2.

52. Recalling the consideration of the subject at the previous session, the expert from Italy introduced TRANS/WP.29/GRPE/2001/4/Add.2 proposing amendments to align the provisions of the original document with those of Regulation No. 96.

53. GRPE adopted TRANS/WP.29/GRPE/2001/4, TRANS/WP.29/GRPE/2001/4/Add.1 and TRANS/WP.29/GRPE/2001/4/Add.2 with the following amendments (proposed by the United Kingdom and Italy):

Paragraph 5.2.3.3.2. and 5.2.3.3.3., replace "reference fuel G20" by "reference fuel GR".

Annex 6, paragraph 4.1., amend to read:

"4.1.                   ... maximum torque speed as defined in paragraphs 2.9. and 2.11. of this Regulation.

The values ..."

54. GRPE requested the secretariat to submit the document to WP.29 and AC.1 as a proposal for a new draft Regulation, for consideration during their sessions of November 2002.

ENVIRONMENTALLY FRIENDLY VEHICLES (EFVs)

Documentation: Informal documents Nos. 7 and 8 of annex 1 to this report.

55. The expert from Japan briefed GRPE on the main issues of the EFV International Conference held in Tokyo on 15 and 16 January 2002. He pointed out the relationship of the EFV International Conference to WP.29 (informal document No. 7 and its supplement). With regard to the follow-up of that event, GRPE was informed about the next conference, intended to be held again in Tokyo, on 23 and 24 January 2003. Japan requested Mr. Gauvin, as Chairman of GRPE and WP.29, to participate at the Conference.

56. The experts from the United States of America and from the European Commission confirmed the high importance of this subject and the participation of their institutions at the Conference. The experts from OICA and ENGVA also confirmed their support and active participation at the Conference.

57. GRPE took note of informal document No. 8 (tabled by Japan) on the fifth report concerning the "Future Policy for Motor Vehicle Exhaust Emission Reduction" of the Central Environment Council of Japan.

EXCHANGE OF INFORMATION ON NATIONAL AND INTERNATIONAL REQUIREMENTS  
ON EMISSIONS

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

58. The expert from South Africa recalled the objectives of his Government on environmental and safety issues in transport. He briefed GRPE on the Regulatory Colloquium held in South Africa on 19 March 2002, organized by the South African Bureau of Standards (SABS), the Department of Transport and the Department of Trade and Industry. He acknowledged the active participation of a staff member of the Transport Division secretariat and his presentation of the work of WP.29 and explanation of functions of the 1958 and 1998 Agreements, applied by South Africa. He also acknowledged the participation and presentation by Mr. T. Akiba of JASIC.

59. GRPE took note of informal document No. 4 tabled by Canada on Canadian on-road vehicle and engine emission regulations as well as informal document No. 6 tabled by the European Commission on the current and future European Community Emission Requirements.

OTHER BUSINESS

(a) Round-table "New Vehicle Propulsion Technologies" (results and follow-up)

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

60. The Chairman of GRPE recalled the round-table, held in Geneva on 20 February 2002, and thanked all the lecturers and OICA, CLEPA and CONCAWE for their excellent support in the preparation of the event. The Chairman acknowledged the high-level of expertise of the speakers and commended the efforts invested in the presentations at that event.

61. The secretariat informed GRPE that all presentations of the round-table were available in the website of the Inland Transport Committee ( <http://www.unece.org/trans/main/itc/itc.html> ), with a direct link from the website of WP.29 ( <http://www.unece.org/trans/main/welcwp29.htm> ).

(b) Evolution of fuel quality

Documentation: Informal documents Nos. 14 and 20 of annex 1 to this report.

62. The expert from OICA introduced informal document No. 14 describing the significant effect of the fuel quality on vehicle emissions and the need to improve the fuel quality further. The expert from CONCAWE stated that the fuel quality level should be based on the air quality objectives and analysis of specific market situations within the different regions.

63. GRPE acknowledged the problem and agreed to take it into consideration during the future discussion of the proposal for the 05 series of amendments to Regulation No. 83. GRPE requested the secretariat to distribute at the forty-fifth GRPE session in January 2003 informal document No. 9 with an official symbol.

64. The expert from ATC/CEFIC introduced informal document No. 20 concerning metallic based fuel additives.

65. The expert from OICA criticized the presentation of this paper and informed GRPE of the views of his organization.

- (c) Regulation No. 85 (Measurement of net power of M and N categories vehicles)

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

66. The expert from Japan introduced informal document No. 9 proposing draft amendments aligning the provisions of Regulation No. 85 with those of ISO standards and the corresponding European Union Directive.

67. GRPE agreed to resume this item at the forty-fifth GRPE session in January 2003. For that purpose, the secretariat was requested to distribute informal document No. 9 with an official symbol.

- (d) Tribute to Mr. Biver, (Deputy Technical Director of OICA)

68. Learning of his approaching retirement (para. 10 above), GRPE thanked Mr. Biver for his valuable contributions and wished him a long and happy retirement.

#### ELECTION OF OFFICERS

69. Following the announcement by the Secretary on Thursday morning, 13 June 2002, and in compliance with Rule 13 of the Rules of Procedure (TRANS/WP.29/690), GRPE called the election of officers on Thursday afternoon. Mr. B. Gauvin (France) was re-elected the Chairman for the two sessions scheduled for the year 2003.

#### AGENDA FOR THE NEXT SESSION

70. For its forty-fifth session to be held in Geneva, Palais des Nations, from Monday 13 January 2003, 10.00 h until Friday 17 January 2003, 12.30 h GRPE agreed on the following agenda:

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

To be held on Monday, 13 January 2003, from 9.30 h till 17.30 h. The agenda of the meeting will be prepared by the WWH-OBD group secretariat and distributed to the members of the group prior to the meeting. Note by the secretariat: This informal meeting will be held without interpretation.

- (b) Informal meeting of the GRPE working group on the world-wide heavy-duty certification procedure (WHDC)

To be held on Tuesday, 14 January 2003, from 9.30 h till 12.30 h. The agenda of the meeting will be prepared by the WHDC secretariat and distributed to the members of the group prior to the meeting. Note by the secretariat: This informal meeting will be held without interpretation.

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

To be held on Tuesday, 14 January 2003, from 14.30 h till 17.30 h. The agenda of the meeting will be prepared by the Off-Cycle emissions group secretariat and distributed to the members of the group prior to the meeting.

(d) Informal meeting of the GRPE working group on the world-wide motorcycle emission test cycle (WMTC)

To be held on Wednesday, 15 January 2003, from 9.30 h till 12.30 h. The agenda of the meeting will be prepared by the WMTC secretariat and distributed to the members of the group prior to the meeting.

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

To be held on Wednesday, 15 January 2003, from 14.30 h till 17.30 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.

(f) Forty-fifth session of the GRPE proper

To be held Thursday, 16 January 2003, from 9.30 h until 17.30 h and on Friday, 17 January 2003, until 12.30 h. 1/:

1. Regulation No. 49 (Emissions of C.I., NG, and P.I. (LPG) engines)
  - 1.1. Final review of the proposal for draft 04 series of amendments
  - 1.2. Development of the emission testing procedure (WHDC)
  - 1.3. Off-Cycle emissions
  - 1.4. 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. Amendments to ECE Regulations
  - 4.1. Regulation No. 83 (Emissions of M1 and N1 categories of vehicles)
  - 4.2. Regulation No. 85 (Measurement of net power of M and N categories of vehicles)
  - 4.3. Regulation No. 101 (Emissions of carbon dioxide and fuel consumption of M1 and N1 vehicles)
  - 4.4. Regulation No. 103 (Replacement catalytic converters)
  - 4.5. Regulation No. 110 (Specific components for CNG)
5. Replacement catalytic converters for vehicles with OBd
6. Application of ECE Regulations to hybrid vehicles
7. Hydrogen-fuelled vehicles

8. Environmentally Friendly Vehicles
  9. Exchange of information on national and international requirements on emissions 2/
  10. Other business
  - 10.1 Evolution of fuel quality
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1/ As part of the secretariat's efforts to reduce expenditure, all the official documents distributed prior to the session, by mail or placed on the ECE WP.29 web-site, 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").

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

Annex 1

LIST OF INFORMAL DOCUMENTS DISTRIBUTED WITHOUT A SYMBOL DURING THE SESSION

<b>No.</b>	<b>Transmitted by</b>	<b>Agenda item</b>	<b>Language</b>	<b>Title</b>
1.	Russian Federation	1.1.	E/R	Proposal on draft 03 Series of Amendments to the ECE Regulation No. 49
2.	Russian Federation	4.2.	E/R	Proposal on draft Amendments to the ECE Regulation No. 83
3.	Norway	4.2.	E	Proposal on draft 06 Series of Amendments to the ECE Regulation No. 83
4.	Canada	10.	E	Canadian on-road vehicle and engine emission regulations
5.	United Kingdom	2.	E	Phase I report of Particle Measurement Programme (PMP)
6.	European Commission	10.	E	Current and future European Community emission requirements
7.	Japan	9.	E	EFV International Conference
8.	Japan	9.	E	Future policy for motor vehicle exhaust emission reduction (fifth report)
9.	Japan	11.3.	E	Proposal for draft amendments to Regulation No. 85
10.	Italy	4.1.	E	Proposal for amendments to Regulation No. 67
11.	Italy	4.5.	E	Proposal for amendments to Regulation No. 110
12.	Germany	1.2.	E	Final report on the results of Validation Step 1 (WHDC)
13.	ISO	4.5.	E	Vehicles propelled by compressed natural gas (CNG)
14.	OICA	11.2.	E	Proposal for an amendment to Regulation No. 83.05
15.	Norway	2.	E	Characterization of tailpipe exhaust emissions from 6 modern diesel passenger cars in demanding conditions
16.	France	6.	E	Proposal for amendments to the 05 series of amendments to Regulation No. 83
17.	Chair WMTC	3.	E	Status Report on the Work of the WMTC Group

<b>No.</b>	<b>Transmitted by</b>	<b>Agenda item</b>	<b>Language</b>	<b>Title</b>
18.	AEGPL	4.1.	E	LPG: a professional alternative motor fuel for the next 20 years
19.	Netherlands	4.1.	E	Comments on document TRANS/WP.29/GRPE/2002/10
20.	ATC/CEFIC	11.2.	E	Metallic Fuel Additives
21.	Netherlands & Italy	4.1.	E	Proposal for amendments to Regulation No. 67

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Annex 2

PROPOSAL FOR AMENDMENTS TO REGULATION NO. 67,  
ADOPTED BY GRPE AT ITS FORTY-FOURTH SESSION

Note by the secretariat: Amendments to document TRANS/WP.29/GRPE/2002/10 are reproduced as tabled by Italy and the Netherlands in informal document No. 21 during the forty-fourth session of GRPE. However, the secretariat corrected paragraph 6.15.1.3. by the wording proposed in informal document No. 19.

Paragraph 6.15.1.3., amend to read:

" ... that limits the filling at 80 per cent +0/-5 per cent of the capacity of the container, for which the 80 per cent stop valve is designed, shall withstand a pressure .... not exceed 500 cm<sup>3</sup>/minute. The valve must be tested with all the containers on which it is intended to be fitted or the manufacturer must declare by calculation for which containers types this valve is suitable."

Paragraph 6.15.4.1., add at the end:

".... exchange medium. The material shall meet the prescriptions laid down in annex 15, paragraph 17."

Paragraph 6.15.11.1., amend to read:

" .... the electric power connections should meet IP54 specifications according to IEC EN 60529:1997-06."

Annex 3,

Paragraph 3.6., amend to read:

"Endurance ..... Annex 15, para. 9  
(with 200 operation cycles)"

Paragraph 7.6., delete reference to the following test:

"Endurance ..... Annex 10, para. 2.7."

Annex 7, paragraph 3.6., amend to read:

"Endurance ..... Annex 15, para. 9  
(with 200 operation cycles)"

Annex 8, paragraph 3.3.2.3., correct the reference from "3.3.1.1." to "3.3.2.1."

Annex 9, paragraph 5., delete the reference to paragraph "6.15.9. Non return valve"

Annex 10,

Paragraph 2.1.2.2.2.2., amend to read:

"2.1.2.2.2.2. The tensile strength value obtained must meet the minimum levels required by EN 10120."

Paragraph 2.2.2.1.2. and a new paragraph 2.2.2.1.3, amend to read:

"2.2.2.1.2. Examination of the tear and the shape of its edges.

2.2.2.1.3. Bursting pressure."

Delete the text after bursting pressure: "volume of water .... shape of its edges."

Annex 15,

Table 1,

(i) add a new "X" to the row dealing with "Resistance to dry heat" and "Ozone ageing" under Class 3 column.

(ii) add at the end the following row:

"

Compatibility with heat exchange fluid		X		
--	--	---	--	--

"

(iii) delete all footnotes, the relevant references to them in the table and the text following the footnotes themselves up to the end of paragraph 2.

Paragraph 4. Correct the reference to "paragraph 7" to "paragraph 9."

Paragraph 5.1., add at the end the following sentences:

" .... . The above prescriptions are deemed to be satisfied, if the provisions of paragraph 5.4. are met."

Paragraph 8.4., delete the words "of air"

Paragraph 8.8., correct the pressure value "2,300 kPa" to read "2,600 kPa"

Insert a new paragraph 9.5., to read:

"9.5 Endurance for 80 per cent stop valve

9.5.1 The 80 per cent stop valve shall be capable to withstand 6,000 complete filling cycles to the maximum filling degree."

Paragraph 10.3.1., amend to read:

" ..... of 20, 50 and 80 l/min or to the maximum flow rate under an upstream pressure of 700 kPa abs".

Paragraph 10.5.1., renumber into paragraph 10.4.1.

Paragraph 10.5.2. to paragraph 10.5.7., renumber into paragraph 10.5.1. to paragraph 10.5.6.

Paragraph 12.1., delete the reference to "DIN 50021"

Paragraph 12.2., delete the reference to "DIN 50916"

Add a new paragraph 17., to read:

- "17. Compatibility with heat exchange fluids of non metallic parts
- 17.1. Test samples shall be submerged in heat exchange medium for 168 hours at 90 °C; then they shall be dried for 48 hours at a temperature of 40 °C. The composition of the heat exchange medium used for the test is water/ethylene-glycol fluid of 50%/50%.
- 17.2. The test is deemed to be satisfactory if the change in volume is less than 20 per cent, the change in mass is less than 5 per cent, the change in tensile strength is less than -25 per cent and the change in elongation at break is within -30 per cent and +10 per cent."

General amendment:

Include in all the annexes reference to footnote "\*\*/ only for non-metallic parts", when reference is made to "Resistance to Dry heat"

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