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Working Party on Pollution and Energy (GRPE)

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

(15 - 18 January 2002)

ATTENDANCE

1. GRPE held its forty-third session from 15 to 18 January 2002 (morning only), 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; France; Germany; Hungary; Italy; Japan; Netherlands; Norway; Poland; Romania; 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); Automobile Emissions Control by Catalysts (AECC/CEFIC); European LPG Association (AEGPL); European Natural Gas Vehicle Association (ENGVA); Federation of European Motorcyclists Associations (FEMA); 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.

2. The twelfth informal meeting of the GRPE working group on the worldwide heavy-duty certification procedure (WHDC group) was held on 15 January 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; Germany; Hungary; Italy; Japan; Netherlands; Norway; Romania; Russian Federation; 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); Automobile Emissions Control by Catalysts (AECC/CEFIC). A summary of the proceedings of this informal meeting is given below (paras. 5 and 6).

3. The fourth informal meeting of the GRPE working group on the world-wide motorcycle emission test cycle (WMTC) was held on 16 January 2002 (morning only), under the chairmanship of Mr. Havenith (Netherlands). Experts from the following countries and organizations participated in the work: Belgium, Canada; Czech Republic; Denmark; Germany; Hungary; Italy; Japan; Netherlands; Norway; Spain; Sweden; Switzerland; United Kingdom; United States of America; 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); A summary of the proceedings of this informal meeting is given below (paras. 25-29).

4. The second informal meeting of the GRPE Particle Measurement Programme (PMP) working group was held on 16 January 2002 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; France; Germany; Hungary; Italy; Japan; Netherlands; Norway; Poland; Romania; 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); European Natural Gas Vehicle Association (ENGVA); Federation of European Motorcyclists Associations (FEMA); Engine Manufacturers Association (EMA). A summary of the proceedings of this informal meeting is given below (paras. 21-24).

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

(a) Development of the emission testing procedure

Documentation: Informal documents Nos. 1, 3, 6, 11 and 12 of annex 1 to this report.

5. The Chairman of the WHDC group, Mr. C. Havenith (Netherlands) briefed GRPE on the status of the project, as considered during the informal meeting on 15 January 2002 (see para. 2 above). He recalled that the WHDC cycle development had been concluded by the presentation of the final report during

the previous session of GRPE (TRANS/WP.29/GRPE/42, para. 5) and, since then, the Step 1 validation programme had been successfully concluded by the Swiss laboratory EMPA (informal document No. 12). The work progressed to Step 2, for which Japan had already delivered the results of the tests of four engines, whilst preparations were under way for testing five or six engines in Switzerland and Germany, including some gas-fuelled engines. He said that progress was also being made by the ISO subgroup (TRANS/WP.29/GRPE/42, para. 6) and envisaged a more detailed report at the next session of GRPE. Concluding his report, Mr. Havenith considered the progress positive, but admitted that compared with the original timetable there was about a one year delay. According to his estimate, the Step 2 validation could be concluded by October 2002, making its results available for the GRPE forty-fourth session, in January 2003. He thanked the Governments and the industry for the material and financial support and encouraged continuing cooperation.

6. The Chairman of GRPE acknowledged the results of the work done in the WHDC development programme. He considered it very important, encouraged the continuation, and believed that its delay against the original schedule should not cause major concerns. GRPE agreed that the WHDC group should meet before the forty-fourth session, using one half-day of the official session time, with the simultaneous interpretation (see para. 77 below).

7. The expert from the United States of America presented informal document No. 3, containing the minutes of the first meeting of the informal group on Off-Cycle emissions that she chaired. She reported that the group had concluded that its ultimate goal should be the developing of an in-use test, and requested GRPE to endorse the group's terms of reference (reproduced below, on the basis of informal document No. 6):

Concerning the "off-cycle" emissions, i.e. engine speed and torque combinations that are not covered in the official test procedure and the ambient conditions of altitude and temperature outside of the range specified for laboratory testing, the group shall pursue the development of a global regulatory structure for addressing off-cycle emissions which will include:

- (a) A common view of the goal of a global technical regulation for off-cycle emissions
- (b) Common definitions for AECDs and similar language for defeat device identification
- (c) A common view regarding test cycles, control areas, and ambient conditions.

8. The expert from OICA said that the off-cycle emission requirements would have important implications in the future and requested time to study the proposed programme. GRPE considered his request justified, but agreed that the proposal presented by the United States of America was in principle acceptable and authorized the Off-Cycle group to work according to the proposed terms of reference (para. 7 above) until the forty-fourth GRPE session, where the mandate should be adopted. It also agreed to provide for the group one half-day of the official session time with interpretation, prior to the forty-fourth session (see para. 77 below).

9. The expert from OICA recalled the commitment made during the one-hundred-and-twenty-fifth session of WP.29 (TRANS/WP.29/815, para. 31) and presented the proposal for the draft 04 series of amendments to Regulation No. 49, aligning its provisions with EC Directive 2001/27/EC (amending Directive 88/77/EEC). He outlined the major modifications (improved provisions prohibiting the cycle defeat devices and/or irrational control strategy, amending of provisions for the NG-fuelled engines, inclusion of ethanol-fuelled engines, etc.). He said that the transitional provisions in the proposal were also aligned with the Directive and establish the application of Euro 4 limits (2005), cessation of validity of the 03 series of amendments (year 2000, Euro 3, Directive 99/96/EC) and the introduction of 2008 limits (Euro 5).

10. Concluding his presentation, the expert from OICA informed GRPE that he had already received some comments to his proposal, namely from Poland and the European Commission, and agreed to transmit the corrected proposal to the secretariat by the end of February 2002 (see also para. 14 below).

11. GRPE agreed with the proposal and authorized the secretariat to prepare the corrected draft for transmission to WP.29 and AC.1 for consideration at their June 2002 sessions. At the same time it requested that it be also listed in the agenda of its forty-fourth session, in order to make its final review.

12. The expert from Germany recalled his proposal concerning the NG and LPG reference fuels (TRANS/WP.29/GRPE/1998/11) and the agreement in principle to consider them simultaneously for Regulation No. 49 and Directive 88/77/EEC (TRANS/WP.29/GRPE/36, para. 19).

13. In reply to the above intervention, the expert from the European Commission envisaged that the modification of the Directive would be proposed in the course of the year and suggested that Regulation No. 49 should follow.

14. The expert from the Czech Republic presented informal document No. 11 and provided justification for the proposed alignment of annexes 2A and 2B of Regulation No. 49 with Directive 99/96/EC. GRPE accepted the proposal and invited the expert from OICA to incorporate it in the draft 04 series of amendments to the Regulation (see para. 10 and 11 above).

(b) On-board diagnostics (OBD) for heavy-duty vehicles

Documentation: Informal document No. 4 of annex 1 to this report.

15. The GRPE Chairman recalled the initial consideration of the subject during the forty-second session (TRANS/WP.29/GRPE/42, paras. 51-54) and reported that in September 2001, Japan agreed to chair the informal group on OBD and proposed Mr. M. Odaka as its Chairman.

16. Mr. Odaka presented to GRPE a proposal (informal document No. 4) for the terms of reference and schedule for the group, suggested to be called World-Wide Harmonized Heavy-Duty OBD group (WWH-OBD). He informed GRPE that Mr. J.-F. Renaudin had agreed to assure the secretariat for the group. GRPE was informed that the next meeting of the group was scheduled for 22 February 2002, at Tokyo.

17. GRPE considered the proposal and adopted it. The adopted terms of reference and the schedule of work for the WWH-OBD group, reproducing informal document No. 4, are in annex 2 to this report.

18. During the discussion, the expert from the European Commission acknowledged that the terms of reference of the group comply well with the plans of the EC and agreed to provide input for the group. He regretted that he would be unable to take part in the first meeting in Tokyo (see para. 16 above). The expert from the United States of America wished success to the group and suggested also cooperation with experts from California. She indicated that the US delegation would do its best to attend the first meeting in Tokyo.

19. The expert from CLEPA said that the group should pay attention to the use of OBD for repairs, together with all necessary manufacturers' information. His comment was supported by the expert from the European Commission and endorsed by GRPE.

20. GRPE also agreed that the WWH-OBD group should meet before the forty-fourth session, using one half-day of the official session time, with the simultaneous interpretation (see para. 77 below).

PARTICULATE MEASUREMENT PROGRAMME (PMP)

Documentation: Informal document No. 10 of annex 1 to this report.

21. The Chairmen of the PMP informal group, Mr. M. Dunne (United Kingdom), informed GRPE about the activities of the group. He recalled that, since the first meeting of the PMP group (informal document No. 10), the research group had met in London (31 July and 1 August 2001), Essen (29 and 30 November 2001) and also just prior the GRPE session, in the morning of 15 January 2002. The intensive work produced its results and the PMP group was concluding Phase I of the programme, i.e. collecting of information. Another meeting of the research group was envisaged in the near future, most likely in London.

22. During the PMP group meeting held on 16 January 2002 (see para. 4 above), the delegates received summary reports and presentations and were given matrices concerning instrumentation, sampling and conditioning, to provide additional inputs. He said that the final report of Phase I was about to be completed and the consolidated matrix information was already available for fourteen instruments and a corresponding number of measurement systems.

23. Phase II of the PMP programme should start almost on schedule and select the best candidate(s) for the particulate matter emission measurement. During this phase a number of instruments and engines should be tested and the PMP Chairman acknowledged that preparations were well under way in a testing laboratory in Switzerland.

24. The Chairman of GRPE commended the progress made by the group and suggested that the next meeting of the PMP group should be scheduled before the forty-fourth session of GRPE, using one half-day of the official session time, with the simultaneous interpretation (see para. 77 below).

DEVELOPMENT OF A WORLDWIDE MOTORCYCLE EMISSION TEST CYCLE (WMTC)

25. The Chairman of the WMTC working group, Mr. C. Havenith (Netherlands), informed GRPE that almost ninety per cent of the test cycle validation data had been collected and its evaluation was in progress. During the meeting held prior to the GRPE session (see para. 3 above) the WMTC group considered a list of six questions that remained to be addressed. The complete validation report was expected to be made available to GRPE for consideration at its forty-fourth session, in June 2002. Based on the validation report results, some additional testing might be necessary and it should be possible to complete it by the end of 2002. Completing his report, Mr. Havenith informed GRPE that he intended to resign from his position of the WMTC Chairman although, to ensure continuity, he would agree to continue his function until the forty-fourth GRPE session, or until a new Chairman of the group was appointed.

26. The Chairman of GRPE commended the harmonization efforts of the WMTC group. He acknowledged that the work was never expected to be easy and informed GRPE that recent decisions in the European Community would likely postpone possible implementation of the WMTC project result. Providing details, the expert from the European Commission confirmed that, in the second reading in the European Parliament, the proposed motorcycle emission limits to be introduced in 2003 and 2006 had been based on a modified test cycle used for passenger cars (Regulation No. 83). He said that the conciliation procedure would now follow, but was not expected to modify the political decision. He also acknowledged the work done by the WMTC group.

27. Considering a candidate for the Chair of the WMTC informal group, it was proposed to nominate Mr. C. Albus (Germany). Mr. Albus accepted the offer, subject to the endorsement by his Government. (Note: The Government of Germany confirmed the nomination.)

28. Speaking for the record, the expert from IMMA commended the work done by the WMTC group under Mr. Havenith's Chairmanship. GRPE supported his words and hoped for implementation of WMTC results sometimes after 2006.

29. Expecting the presentation of the WMTC validation report, GRPE agreed that the WMTC group should meet prior to the forty-fourth session of GRPE, using one half-day of the official session time, with simultaneous interpretation (see para. 77 below).

AMENDMENTS TO ECE REGULATIONS

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

Documentation: TRANS/WP.29/GRPE/2002/1; informal documents Nos. 2, 5 and 16 of annex 1 to this report.

30. The expert from the Netherlands introduced his proposal to introduce in the Regulations provisions concerning all-composite containers (TRANS/WP.29/GRPE/2002/1).

31. The expert from OICA acknowledged the proposal, but said that further consideration was desirable in order to make the proposed provisions adequate to Regulation No. 67. He said that the proposal was largely based on

Regulation No. 110, but the LPG pressure in Regulation No. 67 was lower than the natural gas (NG) pressure in Regulation No. 110 and, therefore, would justify some easing of the proposed test procedures. Besides, it was noted that some proposed technical provisions needed to be more precisely worded.

32. The expert from ISO recalled the work done by ISO TC22/WG 11 and proposed their assistance. The expert from AEGPL also offered assistance in the work. GRPE suggested that they meet with the expert from the Netherlands and prepare their proposals for consideration at the next session of GRPE.

33. The expert from Italy presented informal document No. 2, containing amendments and editorial changes to the Regulation. The expert from the Netherlands agreed to examine the proposal, for detailed consideration at the next session. To allow the consideration, GRPE invited the secretariat to distribute informal document No. 2 with an official symbol.

34. Presenting informal document No. 5, the expert from Italy returned to the decision made by GRPE at its forty-second session (TRANS/WP.29/GRPE/42, paras. 26-28), by which the introduction of the Euro filling unit was agreed and proposed for consideration to WP.29 and AC.1 (document TRANS/WP.29/2001/61). He recalled that WP.29 had decided to postpone the consideration of this proposal at its November 2001 session and said that informal document No. 5 justifies the economical concerns of his Government that objected the proposal. He admitted that the proposed dimensions of the filling unit would require modifications on a majority of vehicles, if retrofitted.

35. In the following exchange of views, the expert from the Netherlands clarified the conditions for the introduction of the Euro filling unit as a Supplement to the Regulation. The expert from AEGPL supported his view. He said that the matter concerned new type approvals only and believed that the problems of retrofitting, revealed by Italy in informal document No. 5, could be resolved.

36. Concerning the disagreement, it was suggested to continue the discussion at the next session of GRPE and the experts were invited to look for a solution, which could allow the proposed standardization of the LPG filling units.

(b) Regulation No. 96 (Off-road engines)

Documentation: TRANS/WP.29/GRPE/2001/9; TRANS/WP.29/GRPE/2001/9/Add.1; informal document No. 19 of annex 1 to this report.

37. The expert from the European Commission confirmed his agreement with the proposals by Poland, contained in documents TRANS/WP.29/GRPE/2001/9 and Add.1 (TRANS/WP.29/GRPE/42, para. 37).

38. Considering the proposal, the expert from Italy supported the intentions of Poland, but suggested that further modifications were necessary, in order to align the text of Regulation No. 96 with ECE Directive 97/68/EC. He said that from document TRANS/WP.29/GRPE/2001/9 the proposals should be deleted for amendments to paragraphs 11.2., 11.3., 11.4. as well as the proposal to delete paragraph 11.5. He introduced informal document No. 19, proposing amendments to annex 1B, including an introduction of a new appendix A. His

informal document effectively replaced TRANS/WP.29/GRPE/2001/9/Add.1. The expert from CEMA supported the proposals made by Italy.

39. GRPE accepted the modifications proposed by Italy, but requested the experts from Italy and from the European Commission to transmit to the secretariat a complete document, to be used as a basis for the proposal for draft Supplement 1 to the 01 series of amendments to Regulation No. 96, and be transmitted for consideration to WP.29 and AC.1 for their June 2002 sessions.

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

Documentation: TRANS/WP.29/GRPE/2000/12/Rev.1; informal document No. 13 of annex 1 to this report.

40. The expert from France informed GRPE that the proposal for introducing provisions for anti-pollution regenerative devices into the Regulation (TRANS/WP.29/GRPE/2000/12/Rev.1) should be considered modified by informal document No. 13. The expert from OICA acknowledged the work, which had been done and considered the result well acceptable. However, he announced that rapid development of the technology concerned would require some additional amendments and OICA would be ready to make two additional proposals for the next session of GRPE.

41. GRPE considered the situation, but preferred to proceed with the amendments to Regulation No. 101 and include the eventual additional provisions at a later stage. Therefore, it was decided to transmit document TRANS/WP.29/GRPE/2000/12/Rev.1 as amended by informal document No. 13 to WP.29 and AC.1 for their sessions of June 2002, as a proposal for draft Supplement 5 to the Regulation.

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

42. Resuming the discussion that had been opened by Poland during the forty-second session (TRANS/WP.29/GRPE/42, paras. 64 and 65), GRPE received the opinion of the expert from Poland that approvals granted by various Parties differ in interpretation of the requirements of the Regulation. The expert from the Russian Federation supported his intervention.

43. In the following discussion, GRPE noted that some interpretation questions raised by Poland and the Russian Federation were of a non-technical nature and were not unique to Regulation No. 103. The experts from the European Commission and from CLEPA suggested that they should rather be addressed by WP.29, as a part of the World Forum's efforts to achieve uniform enforcement and application of type approval and conformity of production standards. They also reminded GRPE that amending of Regulation No. 103 would require parallel modification of the corresponding EC Directive that could be difficult, because no specific problems with its application had been registered in the European Community.

44. Considering the problem industrially important, the Chairman suggested continuing the discussion at the next session, after the expected consideration of the subject in question by WP.29 and the Administrative Committee AC.1 of the 1958 Agreement at their sessions of March 2002.

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

Documentation: TRANS/WP.29/GRPE/2001/7; TRANS/WP.29/GRPE/2002/3;
TRANS/WP.29/GRPE/2002/4; TRANS/WP.29/GRPE/2002/5; TRANS/WP.29/GRPE/2002/6;
TRANS/WP.29/GRPE/2002/7; informal document No. 18, of annex 1 to this report.

45. Recalling the consideration of the subject at the previous session (TRANS/WP.29/GRPE/42, paras. 20 and 22), GRPE noted that the proposal by the Russian Federation to distinguish components approved to moderate and cold temperatures (TRANS/WP.29/GRPE/2001/7) had recently been prepared and tabled as TRANS/WP.29/GRPE/2002/7. In order to allow time for its study, GRPE agreed to postpone its detailed consideration to the forty-fourth session.

46. Following the introduction by the expert from Italy, GRPE considered and adopted documents TRANS/WP.29/GRPE/2002/3 and TRANS/WP.29/GRPE/2002/4 and agreed to transmit their consolidation to WP.29 and AC.1 for consideration at their sessions of June 2002, as a proposal for draft Supplement 1 to Regulation No. 110.

47. Referring to the initial consideration of his proposals during the forty-second session (TRANS/WP.29/GRPE/42, paras. 21 and 22), the expert from ENGVA introduced the proposal for correcting some provisions of the Regulation (TRANS/WP.29/GRPE/2002/5) and the proposal to allow the approvals of vehicles with dual-fuel engines, where diesel fuel is used as a pilot injection for NG (TRANS/WP.29/GRPE/2002/6).

48. The proposals by ENGVA were not discussed in detail, noting that some delegates only received them after their arrival to Geneva. To allow time for their study, GRPE agreed to defer the detailed consideration to the next session.

49. GRPE noted that some of the proposed modifications were intended to align Regulation No. 110 with the final and published ISO Standards. To provide the background for this work, the expert from ISO distributed informal document No. 18 with a complete list of relevant standards.

REPLACEMENT CATALYTIC CONVERTERS FOR VEHICLES WITH OBD

50. The expert from the European Community informed GRPE that the matter was being dealt with in the proposed revision of annex 13 of Directive 70/220/EEC, due to be considered in February 2002. He envisaged that he would be able to table corresponding proposals for adapting Regulations Nos. 83 and 103 at the next session of GRPE.

APPLICATION OF ECE REGULATIONS TO HYBRID VEHICLES

Documentation: Informal document No. 14 of annex 1 to this report.

51. The expert from France, Mrs. B. Lopez, Chairing the informal group on hybrid vehicles, presented the status report of the group's activities (informal group No. 14). She informed GRPE that two meetings had been held and for the next meeting in Paris on 12 March 2002, the group decided to give priority to amending Regulations Nos. 83, 101 and 85, in order to make possible type approval of currently common categories of hybrid electric

vehicles. She reported that the group decided to ask GRPE for guidance concerning the more fundamental approach suggested by the Netherlands (TRANS/WP.29/GRPE/42, para. 32).

52. In the following discussion, the expert from the Netherlands supported the work done by the informal group and said that his expected input should not present a base for a second stage of work but rather justify the approach taken by the group. The expert from the United States of America raised the question of the test conditions for hybrid vehicles and suggested to consider if the worst test condition should include vehicle accessories (e.g. air conditioning system, CD-player, etc). The expert from the Russian Federation suggested that large passenger hybrid vehicles should also be considered.

53. GRPE congratulated the members of the group and Mrs. Lopez for their work. It appreciated the focused approach taken by the group and acknowledged the intention of the expert from the Netherlands to provide its additional justification. It also advised the group to include in its considerations suggestions made by the experts from the United States of America, as far as practicable. The secretariat was requested to distribute informal document No. 14 with an official symbol.

HYDROGEN-FUELLED VEHICLES

54. Mr. C. Albus (Germany), Chairing the informal group, informed GRPE that at the first meeting that had been held at the end of November 2001 in Bonn the group had examined the proposals tabled by the European Integrated Hydrogen Project (EIHP) for draft Regulations concerning the safety for on-board storage of gaseous and liquefied hydrogen. He said that the group aims at developing the proposals into candidate global technical regulations under the 1998 Agreement and advised GRPE that the existing drafts and information about the informal group could be consulted in the EIHP website: <http://www.eihp.org>

55. The expert from the United States of America welcomed the opportunity and reminded GRPE of the expertise in her country in developing fuel cells for road vehicles, using hydrogen and oxygen for producing electricity. The expert from Canada also supported the intention of the group to aim for the regulatory process under the 1998 Agreement and said that safety regulations were under development in his country, based on the existing ISO Standards.

56. The experts from ISO informed GRPE that TC 22 (Road vehicles), TC 197 (Hydrogen energy technologies), TC 58 (Gas cylinders) and TC 220 (Cryogenic storage tanks) were involved. The Chairman of the Canadian National ISO Committee indicated the clear interest of ISO in cooperation with the informal group and said that draft international standards ISO/DIS 13985 (on-board storage of liquid hydrogen) and ISO/DIS 15869 (on-board storage of gaseous hydrogen) were almost finalized.

57. The Chairman of GRPE thanked the informal group and its Chairman for the good start and acknowledged the interest and offers of cooperation demonstrated by the delegations. He said that the preparing of a global technical regulation would require the consent of the Executive Committee AC.3 of the 1998 Agreement and agreed to ask for it during its fourth session in March 2002.

POWER OF ENGINES FOR NON-ROAD MOBILE MACHINERY AND AGRICULTURAL TRACTORS

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

58. The expert from Italy introduced the proposals and said that in his opinion the proposed draft Regulation was ready for adoption. The expert from CEMA supported the need for introducing this new draft Regulation, but suggested that some additional amendments should be made. He listed several, including those to annex 6, in order to take account of the fact that conformity of production checks were done on engines that had not been run-in. The expert from the United Kingdom said that modifications were also necessary to annex 7, in specification of gaseous reference fuels.

59. The expert from the European Commission mentioned that the introduction of the new draft Regulation would imply modifications to Directive 97/68/EC that currently referred to on-road power. He informed GRPE that a decision in this respect had not yet been taken. The expert from Italy acknowledged the information and said that a corresponding amendment would also be necessary for Regulation No. 96.

60. The expert from Italy agreed to propose a second addendum to the proposal, in cooperation with the experts who raised the comments. GRPE agreed to resume its consideration of the proposal at the next session.

EXCHANGE OF INFORMATION ON NATIONAL AND INTERNATIONAL REQUIREMENTS
ON EMISSIONS

Documentation: Informal documents Nos. 7, 8 and 17 of annex 1 to this report.

61. The expert from Japan presented the Ministerial Statement on Comprehensive Strategy for Environmentally Friendly Vehicles (EFVs) agreed at the conclusion of the Ministerial Conference on Transport in Tokyo on 16 January 2002 (informal document No. 17). He informed GRPE that the conference reached policy consensus including the encouragement of harmonization of EFVs under the 1998 Global Agreement.

62. To provide additional details about the strategy of his Government in promoting the development of next generation EFVs, the expert from Japan distributed informal document No. 8. He outlined the objectives of the programme and its potential to reduce air pollution and consumption of energy.

63. In the discussion that followed, GRPE acknowledged the results of the Ministerial Conference and accepted the proposal of the Chairman to introduce in the next session agenda a new item entitled "Environmentally Friendly Vehicles". It was agreed to start work by defining the EFVs and by setting regulatory objectives.

64. In connection with the above, the expert from the European Commission informed GRPE about the work on emission standards, including also particulate matter emission, which was expected to become mandatory at a later stage. He said that they were expected to affect all vehicle categories and may provide frame for definition of EFVs.

65. The expert from the United States of America tabled informal document No. 7, with an update of the US regulatory activities, concerning the Service Information Availability Rule, proposed a Regulation of industrial emissions and recreational vehicles spark-ignition engines and marine diesel engines. Besides this, the informal document referred to a review of the non-road engines regulatory situation, indicating a need for more stringent particulate matter emission control.

66. The expert from South Africa recalled the questionnaire he had distributed during the forty-second session (TRANS/WP.29/GRPE/42, para. 46) and thanked all respondents. He said that his country was now moving forward on the fuel quality programme and intended to establish a corresponding regulatory framework. He promised to provide for the next GRPE session an information document, concerning also exhaust emissions and quality standards in general.

OTHER BUSINESS

(a) Round-table "New Vehicle Propulsion Technologies"

Documentation: TRANS/2002/12.

67. The Chairman informed GRPE that thanks to OICA, CLEPA and CONCAWE the preparation of the Round-table scheduled for 20 February 2002 was on the right track and drew attention to its programme, issued by the Inland Transport Committee (TRANS/2002/12). He said that the papers were expected to be received by the secretariat only shortly before the Round-table, in order to make them available to the interpreters and that they should later be published in the website of the Inland Transport Committee (<http://www.unece.org/trans/main/itc/itc.html>) or, alternatively, issued as printed proceedings, if so decided by the ITC. The Chairman acknowledged the high-level of expertise of the speakers and commended the efforts invested in the preparation of the event.

(b) Evolution of fuel quality

Documentation: Informal documents Nos. 9 and 15 of annex 1 to this report.

68. The expert from the European Commission introduced informal document No. 9, providing details of the proposal to amend Directive 98/70/EC by introducing a requirement for making available petrol and diesel fuel with a maximum sulphur content of 10 ppm from 1 January 2005 and making this limit compulsory for diesel fuel by 1 January 2009 and for petrol by 1 January 2011. The Common Position reached by the Council also included the requirement for the Commission to establish fuel quality standards for non-road mobile machinery, when proposing the next (stage 3) emission standards.

69. The expert from OICA tabled informal document No. 15 that reviewed the position on metal-based fuel additives and provided the respective technical background and justification.

70. A discussion followed, and the expert from CONCAWE agreed to transmit informal document No. 15 to the industry, producing the metallic fuel

additives, i.e. Ferrocene (iron) and MMT (Methyl Cyclopentadienyl Manganese Tricarbonyl).

71. In the discussion, an expert from OICA presented the overview of fuel quality in ECE countries and drew the attention of GRPE to the difficulties that inadequate fuel quality caused to modern low-emission engines.

72. Considering the divergent situation in the ECE countries, the expert from France raised the question of the cessation of validity of the 04 series of amendments that had been introduced by the 05 series of amendments to Regulation No. 83. She said that, for some countries, this was difficult to implement and suggested to consider derogation, similar to the one existing for leaded petrol.

73. GRPE acknowledged the problem, which had already been discussed when considering the original proposal for the 05 series of amendments to Regulation No. 83. It accepted in principle the solution proposed by France to use an "interim certificate", not recognized as type approval to Regulation No. 83, but providing all necessary data and allowing temporary continuation of the production and marketing of engines and vehicles conforming to the 04 series of amendments to Regulation No. 83.

74. The expert from France accepted the invitation by GRPE to prepare a working proposal concerning the above subject for consideration at the next session of GRPE.

(c) Tribute to Mr. R. Rijkeboer

75. Following the information concerning his coming retirement, GRPE cordially acknowledged valuable contributions made by Mr. Rijkeboer, who had regularly represented the Netherlands in the sessions for the last thirty years, becoming one of its most senior experts. Mr. Rijkeboer recalled the joys and challenges of his professional career and wished GRPE continued successful work with his successor. Speaking on behalf of GRPE, the Chairman thanked Mr. Rijkeboer and wished him a long and happy retirement.

AGENDA FOR THE NEXT SESSION

76. For its forty-fourth session, GRPE agreed to provide time for five half-day meetings of the WMTC, PMP, WHDC, Off-Cycle Emissions and WWH-OBD informal meetings. Considering that, when retaining at least one-and-half days of the official session time for the GRPE proper this would exceed the allocated time, the GRPE Chairman agreed to request WP.29 at its March 2002 session for allocation of an additional working day with interpretation, a start the session one day earlier, on Monday 10 June 2002. Note by the secretariat: WP.29 endorsed the request, including also additional time for the meeting of WWH-OBD (see (e) below) and assigned to GRPE an additional one-and-half days, with interpretation, at its one-hundred-and-twenty-sixth session.

77. Following the consent by WP.29, the following agenda is proposed for the forty-fourth session of GRPE (Geneva, Palais des Nations, from Monday 10 June 2002, 14.30 h until Friday 14 June 2002, 17.30 h):

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

To be held on Monday, 10 June 2002, from 14.30 h till 17.30 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.

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

To be held on Tuesday, 11 June 2002, from 9.30 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.

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

To be held on Tuesday, 11 June 2002, from 14.30 h till 17.30 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.

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

To be held on Wednesday, 12 June 2002, from 9.30 h till 12.30 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.

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

To be held on Wednesday, 12 June 2002, from 14.30 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. The Secretary of the group was invited to contact the secretariat in case a need would be recognized during the first meeting in Tokyo (see para. 16 above) for an additional half-day. Note by the secretariat: This request was received. After the consultation with the GRPE Chairman, WWH-OBD will also meet on Friday 14 June afternoon.

(f) Forty-fourth session of the GRPE proper

To be held on Thursday, 13 June 2002, from 9.30 h until Friday, 14 June 2001, 12.30 h. 1/:

1/ As part of the secretariat's efforts to reduce expenditure, all the official documents distributed prior to the session, by mail and/or placed on the 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").

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. 67 (Equipment for LPG)
 - 4.2. Regulation No. 83 (Emissions of M1 and N1 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. Power of engines intended to be fitted on non-road mobile machinery and agricultural tractors
9. Environmentally Friendly Vehicles
10. Exchange of information on national and international requirements on emissions 2/
11. Other business
 - 11.1. Round-table "New vehicle propulsion technologies" (results and follow-up)
 - 11.2. Evolution of fuel quality

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

No.	Transmitted by	Agenda item	Language	Title
1.	OICA	1.1.	E/F	OICA Proposal "04 series of amendments to Regulation No. 49"
2.	Italy	4.1.	E	Proposal for amendments to Regulation No. 67
3.	Off-Cycle informal group Chair	1.1.	E	Minutes of the 1st meeting of the Off-Cycle Emissions Work Group, Ann Arbor, Michigan, December 3, 2001
4.	WWH-OBD informal group	1.2.	E	World-Wide Harmonised Heavy-Duty OBD (WWH-OBD) - Proposed terms of reference for a GRPE ad hoc working group
5.	Italy	4.1.	E	Italian considerations on the LPG Euro connector
6.	United States of America	1.1.	E	Proposal for a Charter for the Working group on Off-Cycle Emissions
7.	United States of America	9.	E	Update of United States Regulatory Activities
8.	Japan	9.	E	Japan's Basic Strategy for Promoting the Development of Next-Generation Environmentally Friendly Vehicles (EFVs)
9.	European Commission	10.2.	E	Fuel quality - amendment of Directive 98/70/EC
10.	PMP informal group	2.	E	Minutes of 1st meeting of the "Particulates measurement Programme" Group, Palais des Nations, Geneva, 31/5/2001
11.	Czech Republic	1.1.	E	Proposal for draft amendments to the 03 series of amendments to Regulation No. 49
12.	WHDC informal group	1.1.	E	WHDC Worldwide Heavy-Duty Certification Validation Results Executive Summary
13.	France	4.3.	E	Proposal of amendments to document TRANS/WP.29/GRPE/2000/12/Rev.1 (Emissions of CO ₂ and fuel consumption of M1 and N1 vehicles)
14.	France	6.	E	GRPE ad-hoc working group on hybrid vehicles Status report

No.	Transmitted by	Agenda item	Language	Title
15.	OICA	10.2.	E	ACEA Position on Metal Based Fuel Additives - Document circulated on behalf of OICA for GRPE information regarding the evolution of fuel quality
16.	OICA	4.1.	E	OICA comments on the document TRANS/WP.29/GRPE/2002/1 for the introduction of all composite containers in Regulation No. 67
17.	Japan	9.	E	The Ministerial Statement on Comprehensive Strategy for "Environmentally Friendly Vehicles" (Ministerial Conference on Transport, Tokyo, Japan, 15-16 January 2002)
18.	ISO	4.5.	E	ISO Standards concerning NGV system components
19.	Italy	4.2.	E	Italian proposal to amend Regulation No. 96, 01 series of amendments, according to the Polish proposal TRANS/WP.29/GRPE/2001/9 and Add.1

Redistribution - informal document of the forty-second GRPE session:

5.	Belarus	4.2.	E/R	Proposal for draft amendments (Corrigendum 1 to the 01 series) to Regulation No. 96
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Annex 2

TERMS OF REFERENCE OF A GRPE INFORMAL GROUP ON WORLD-WIDE HARMONIZED
HEAVY DUTY OBD (WWWH-OBD), ADOPTED BY GRPE AT ITS FORTY-THIRD SESSION

Note by the secretariat: The Executive Committee of the 1998 Global Agreement received during its third session, in November 2001 a proposal by the United States of America to develop a global technical regulation (gtr) dealing with "On Board Diagnostic Systems for Heavy-Duty Vehicles and Engines" (TRANS/WP.29/815, paras. 158-160); the proposal concerned has been issued under symbol TRANS/WP.29/2002/26. In order to carry out the proposed work, a two years' working plan was agreed by GRPE in order to have a first complete gtr proposal available in May 2004.

* * *

1. Scope of the gtr proposal

The gtr proposal will concern the exhaust emissions of regulated pollutants from those heavy-duty vehicles and engines that are homologated against regulative provisions requesting the measurement of their exhaust emissions on an engine test-bed.

It will concern diesel-fuelled compression ignition engines. Vehicles / engines fuelled with alternative fuels as well as hybrid vehicles will be addressed by further amendments to the gtr.

The OBD system will detect failures from the engine itself, as well as from the exhaust after-treatment systems fitted downstream the engine. The package of information exchanged with the vehicle and the powertrain will be part of the monitored elements.

The proposal will be based on the technologies expected to be industrially available at the time it will be enforced, and will take into account particularly the expected state of the electronics in the years 2005-2008 and the expected newest engine and after-treatment technologies.

2. Content of the gtr proposal - Tasks of the working group

Having precisely defined its specific vocabulary, the gtr proposal will address the following issues:

- (a) the failures to be detected by the OBD system
- (b) the information to be made available by the OBD system
- (c) the approval procedure of the OBD system

2.1. Failures

The OBD system has to detect emission related malfunctions.

The task of the WWH-OBD working group is to transform this assertion into a realistic and operational proposal under the continuous arbitrage of GRPE. The proposal will address the interrelation between regulated emissions limits and the concepts of OBD thresholds limits and functional failures. In

that respect the expected monitoring capability of the OBD system at the time the gtr will be enforced will be taken into account and regarded as an input data.

2.2. Information

The OBD system has to alert and to inform about emission related malfunctions.

The task of the WWH-OBD working group is to propose to GRPE possible alert and information principles and to generate the rules associated with the GRPE guidance / decisions.

The working group will address particularly the following issues:

- (a) the communication protocols between the system and the outside world (ISO contribution ?)
- (b) the telecommunication between the OBD system and remote stations (feasibility in the committed time frame ?)
- (c) the recording of engine/vehicle data under a failure event (which priority among the failures ?)

2.3. Approval

The OBD system has to be approved against the gtr requirements.

The task of the WWH-OBD ad-hoc group is to propose an effective test procedure for this approval, including an eventually specific OBD test-cycle, in coherence with the work performed by both the "WHDC" and the "Off-Cycle" GRPE working groups.

This includes the development of adequate specific provisions, should GRPE decide to request from the OBD system a permanent self evaluation of its in-use detection rate (cf. GM presentation in the SAE Toptech meeting - Pasadena 2001).

