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Working Party on the Construction of Vehicles

Working Party on Pollution and Energy (GRPE)

REPORT OF THE MEETING OF EXPERTS ON POLLUTION AND ENERGY
ON ITS THIRTY-SIXTH SESSION
(2 - 5 June 1998)

ATTENDANCE

1. The Meeting of Experts on Pollution and Energy held its thirty-sixth session from 2 June to 5 June (morning) 1998 ^{1/} under the chairmanship of Mr. B. Gauvin (France). Experts from the following countries participated in the work: Austria; Belgium; Czech Republic; Denmark; Finland; France; Germany; Greece; Hungary; Italy; Netherlands; Poland; Romania; Russian Federation; Slovenia; Spain; Sweden; Switzerland; United Kingdom; United States of America. Experts from the European Commission (EC) also participated. Representatives of Japan and of the People's Republic of China took part in the session under paragraph 11 of the Commission's Terms of Reference. Experts from the following non-governmental organizations also participated: International Organization for Standardization (ISO); International Touring Alliance/International Automobile Federation (AIT/FIA); International Road Transport Union (IRU); International Organization of Motor Vehicle Manufacturers (OICA); International Motorcycle Manufacturers Association (IMMA); The Oil Companies' European Organization for Environment, Health and Safety (CONCAWE); European LPG Association (AEGPL); European Natural Gas Vehicle Association (ENGVA).

^{1/} Following the decision taken by GRPE at its thirty-fifth session (TRANS/WP.29/GRPE/35, para. 52), two separate informal meetings, with interpretation services, were held prior to the thirty-sixth GRPE session proper. The schedule of those meetings was later modified (TRANS/WP.29/GRPE/1998/13/Add.1).

2. The informal meeting on particulate emissions was held on 2 June 1998, morning only. In the absence of Mr. M. Dunne (United Kingdom), the session was chaired by Mr. T. Baines (United States of America). Experts from the following countries and organizations participated in the work: Austria; Belgium; Czech Republic; Denmark; Finland; Germany; Italy; Japan; Netherlands; People's Republic of China; Poland; Romania; Slovenia; Sweden; Switzerland; United Kingdom; United States of America; European Commission (EC); International Organization for Standardization (ISO); International Organization of Motor Vehicle Manufacturers (OICA); The Oil Companies' European Organization for Environment, Health and Safety (CONCAWE). A summary of the proceedings of this informal meeting is given below (paras. 39 to 44).

3. The fourth informal meeting of the GRPE working group on the world-wide heavy-duty certification procedure (WHDC) was held on 3 June 1998, under the chairmanship of Mr. C. Havenith (Netherlands). Experts from the following countries and organizations participated in the work: Belgium; Czech Republic; Denmark; Finland; Germany; Hungary; Italy; Japan; Netherlands; People's Republic of China; Poland; Romania; Russian Federation; Slovenia; Sweden; Switzerland; United Kingdom; United States of America; European Commission (EC); International Organization for Standardization (ISO); International Road Transport Union (IRU); International Organization of Motor Vehicle Manufacturers (OICA); The Oil Companies' European Organization for Environment, Health and Safety (CONCAWE). A summary of the proceedings of this informal meeting is given below (paras. 4 to 12).

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

(a) Development of the emission testing procedure

4. The Chairman of the WHDC group informed GRPE that the minutes of the third WHDC meeting (Geneva, 13 January 1998, see TRANS/WP.29/GRPE/35, paras. 5-12) had been approved by the WHDC group and could be provided to GRPE experts on request. After that he reported orally on the results of the fourth meeting (see para. 3 above).

5. He confirmed that after the presentation of a working paper, prepared jointly by the experts from TNO (Netherlands) and TÜV (Germany, former FIGE) and entitled "Development of a world-wide heavy-duty engine test cycle", the WHDC group agreed to consider the TNO/TÜV approach as the reference working basis. In the discussion, the variables of driving patterns and their measurement had been considered. The main areas of concern and the programme budget were also outlined. It had been agreed that more research was needed to make the future test procedure safe against cycle by-passing or beating.

6. During the WHDC meeting two presentations had been given by the experts from Japan, describing the experience in developing a transient test cycle from driving patterns and creation of test cycles for emission measurements. To facilitate the incorporation of the theoretical and practical experience which had been gained in Japan, the Japanese experts agreed to take the TNO/TÜV guidelines and elaborate on it.

7. The WHDC group Chairman also reported that contributions in collecting the statistical driving data had been offered by a number of countries, including Japan and China in order to define a truly representative test cycle. He appreciated also the spirit of cooperation indicated by the delegates of the United States of America, although they had not yet received any official mandate from their Government. OICA had indicated its commitment to cooperate with TNO and TÜV on verification of the range and format of statistical data to be collected.

8. The WHDC group had also received the progress report by the Chairman of the "ISO Activities" subgroup, Mr. H.J. Stein (OICA). For the three ISO Working Groups (TRANS/WP.29/GRPE/35, para. 6), he had provided summaries of the meetings held so far and confirmed the wide international cooperation. He also gave a budget estimate for the experimental programme.

9. The complete WHDC programme should be evaluated by practical tests expected to be completed by the end of 1999. The estimated total WHDC budget of 360,000 ECU should, in principle, be shared by Governments and OICA for which, however, the OICA General Assembly approval was still needed. Round robin testing and verifications had been planned for the period of 2000-2001.

10. The expert from the United States of America said that in his country the development of a world-wide heavy-duty test cycle was not being given high priority because it had not been requested by the industry. Whilst he acknowledged the opportunity to participate in the WHDC group as an observer, he confirmed an active participation in the ISO Activities subgroup, on the task of particulate emission measurements.

11. Referring to the report of the last session (TRANS/WP.29/GRPE/35, para. 13), the expert from CONCAWE returned to the question of fuel qualities and reference fuel specifications. The expert from the EC confirmed that a joint proposal by the engine and fuel industry should be considered for future fuel qualities and that reference fuels were expected to reflect the average market qualities.

12. GRPE noted the progress report of the WHDC group and agreed that the fifth meeting of this group should be held on 13 January 1999, the second day of the thirty-seventh GRPE session (see para. 47 below).

(b) Approval of vehicles equipped with LPG- and NG-fuelled engines

Documentation: TRANS/WP.29/GRPE/1998/14; informal documents Nos. 1, 2 and 3 of the annex to this report.

13. To support the proposal for the adoption of non-methane HC limits for NG-fuelled engines (TRANS/WP.29/GRPE/1998/14), the expert from ENGVA presented informal documents Nos. 1 and 2.

14. Referring to the above proposal by ENGVA, the expert from the EC informed GRPE that for heavy-duty NG engines the possibility to measure the non-methane HC was already contained in the proposal for EURO 3 (expected to be introduced in October 2000), although the methane emission would still be kept under control and the total emissions of NG-fuelled engines comparable with those of conventional engines.

15. In view of the above information, the Meeting of Experts agreed that Regulation No. 49 would need to be amended in line with the EC Directive (88/77/EEC) amendment proposal. It was noted that a corresponding EURO 3 proposal for amending Regulation No. 83 should be available in mid 1999 (see also para. 32 below).

16. The proposal (informal document No. 3) for a correction of an error in draft Corrigendum 2 to Supplement 1 to the 02 series of amendments to Regulation No. 49 (TRANS/WP.29/1998/29) was adopted and the Meeting of Experts requested the secretariat to transmit it to WP.29 for consideration at its one-hundred-and-fifteenth session.

Note by the secretariat: An informal document (No. 10) was distributed during the WP.29 session and later published as TRANS/WP.29/1998/29/Rev.1 (TRANS/WP.29/638, para. 68).

(c) Reference fuels

Documentation: TRANS/WP.29/GRPE/R.275/Rev.1; TRANS/WP.29/GRPE/1998/11; informal documents Nos. 4 and 12 of the annex to this report.

17. The expert from the Netherlands introduced informal document No. 4, proposing to modify the LPG reference fuel A of document TRANS/WP.29/GRPE/R.275/Rev.1, in particular with respect to the content of olefines and the octane number. He informed GRPE that the originally proposed fuel A with a higher olefin content was generally not available and could only be purchased at an extreme cost.

18. It was noted that whilst LPG reference fuels were specified as mixtures of pure gases, commercially available LPG fuels had relatively wide tolerances at refinery exits. To provide more information on the above subject, the expert from the AEGPL agreed to provide for consideration at the next session a survey of LPG fuels commercially available in Europe.

19. The expert from Germany tabled informal document No. 12, completing the proposal given in document TRANS/WP.29/GRPE/1998/11. The Meeting of Experts agreed in principle that this German proposal should be considered both for Regulation No. 49 and for the amendments to Directive 88/77/EEC (EURO 3). The expert from the EC was invited to bring the matter to the attention of the EC and to propose modifications necessary for maintaining the alignment of the Regulation with the Directive.

AMENDMENTS TO ECE REGULATIONS WITH RESPECT
TO LPG- AND NG-FUELLED VEHICLES/ENGINES

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

Documentation: TRANS/WP.29/R.808; TRANS/WP.29/1998/31; informal documents Nos. 5, 8, 9 and 16 of the annex to this report.

20. The expert from Italy tabled informal document No. 5 containing provisions for the temperature triggered pressure relief device (fuse), intended to avoid tank explosions in fires (TRANS/WP.29/GRPE/35, paras. 22 and 23).

21. In the discussion which followed, it became clear that more time would be needed to consider the above-mentioned Italian proposal. The Meeting of Experts accepted therefore the proposition of its Chairman to suggest to WP.29 that during the one-hundred-and-fifteenth session the proposal for the temperature triggered pressure relief device (fuse) should be eliminated (text marked by square brackets in document TRANS/WP.29/1998/31) and a commitment made for introduction of this device at a later time, after a consent was reached.

22. The expert from Italy noted the proposal (para. 21 above), although he entered his reservation to this motion which required consultation with the authorities in his country. He envisaged an ad hoc meeting to be organized in Rome, where the need for the proposed device would be demonstrated and justified and a proposal based on informal document No. 5 elaborated. Note by the secretariat: This ad hoc meeting was convened on 21 July 1998 in Rome and a compromise proposal was developed, expected to be transmitted to WP.29 for consideration at its one-hundred-and-sixteenth session (and eventually to AC.1 for adoption by vote at its tenth session) under document symbol TRANS/WP.29/1998/63.

23. Informal documents Nos. 8 and 16 by Greece and Italy containing corrigenda to documents TRANS/WP.29/R.808 and TRANS/WP.29/1998/31 were considered and adopted. The Meeting of Experts also considered and adopted, with minor changes, informal document No. 9, tabled by OICA and proposing certain modifications to document TRANS/WP.29/R.808. The secretariat was requested to transmit a consolidation of these three informal documents to WP.29 for consideration at its one-hundred-and-fifteenth session. Note by the secretariat: An informal document (No. 11) was distributed during the WP.29 session and later published as TRANS/WP.29/1998/31/Add.1 (TRANS/WP.29/638, para. 71).

PROPOSAL FOR A DRAFT REGULATION CONCERNING RETROFIT SYSTEMS FOR LPG AND CNG

Documentation: TRANS/WP.29/GRPE/R.279; TRANS/WP.29/GRPE/1998/12; informal documents Nos. 6 and 14 of the annex to this report.

24. Informal documents Nos. 6 and 14 were briefly examined and the Meeting of Experts requested the secretariat to distribute them with an official symbol for consideration at the next session.

25. Considering document TRANS/WP.29/GRPE/1998/12, the expert from Germany recommended that tolerances given for engine displacement in order to define an engine family should be reconsidered (paragraph 2.4.1.1. f iv)). The expert from the Netherlands suggested to eliminate the proposals related to paragraphs 6.1.1.7.1 to 6.1.1.7.1.2. and to paragraphs 6.1.1.10. to 6.1.1.10.4. The expert from Italy agreed to check the above suggestions for consideration during the next session (12-15 January 1999).

26. The Meeting of Experts agreed to resume consideration of the proposal for this draft Regulation at its next session, together with the above-mentioned amendments.

PERSPECTIVES IN TRANSPORT AND THE ENVIRONMENT

(a) Technical requirements on vehicles after the year 2000

Documentation: Informal document No. 15 of the annex to this report.

27. The expert from the EC distributed the informal document, containing an overview report of the Auto-Oil II Programme Contact Group on its meeting of 18 May 1998. He explained the scope, structure and timetable of the Auto-Oil II and briefed the Meeting of Experts on the progress which had already been reached. He stressed that the final report was planned for April 1999.

(b) Reduction of carbon dioxide emissions and fuel consumption

28. The expert from the EC recalled the information given during previous sessions (TRANS/WP.29/GRPE/35, paras. 42 and 43) and said that currently the CO₂ emission value of 140 g/km was under consideration as an European average to be reached by 2008, representing a 25 per cent CO₂ emission reduction with respect to the 1995 level.

29. The expert from OICA said that the positive attitude of the motor vehicle industry to reduction of fuel consumption and consequently CO₂ emissions was being confirmed by agreements made on a national level between the Governments and manufacturers. The expert from CONCAWE noted the importance of reducing the fuel sulphur content, particularly for the new fuel injection technologies leading to lower fuel consumption.

EXCHANGE OF INFORMATION ON NATIONAL AND INTERNATIONAL REQUIREMENTS
ON EMISSIONS

Documentation: Informal document No. 13 of the annex to this report.

30. The following information was given:

European Community: Directive 97/68/EC, extending ECE Regulation No. 96 to non-road mobile machinery had been published (Official Journal of the EC, No. L59, 27 February 1998). The net power categories conform to Regulation No. 96, however, with the first one (A) having the top limit added ($130 \text{ kW} \leq P \leq 560 \text{ kW}$). For Stage I type approvals, the implementation date of 30 June 1998 has the limits identical with Regulation No. 96. Stage II reduced emission limits implementation dates are staggered from 31 December 1999 (when a new low power category would also be affected $18 \text{ kW} \leq P \leq 37 \text{ kW}$), to 2002. Registration dates and placing on the market are based on the engine production dates. Further reductions of emission limits should be proposed by the European Commission by the end of 1999.

For passenger car emission limits (TRANS/WP.29/GRPE/35, annex 6), the conciliation procedure should soon be concluded and its outcome will most likely influence the Auto-Oil II Programme (2005 - EURO 4).

Greece: Draft law being considered for mandatory inspections of 2- and 3-wheeled vehicles, including emissions.

Japan: Strengthened emission regulations (from 2000 for domestic new models and 2002 for all domestically produced and imported vehicles) shall have reduced emission limits (including evaporative), increased durability requirements and mandatory on-board diagnostics; the target values were set for fuel efficiency of motor vehicles, based on categories (passenger cars for 2000, light petrol-fuelled trucks for 2003 (informal document No. 13). In this informal document information was also given regarding the accession of Japan to the 1958 Agreement (Note by the secretariat: see TRANS/WP.29/638, paras. 81 and 82).

31. Referring to the emission limits under consideration in the EC, the expert from ENGVA noted that his organization had proposed already more than two years ago to introduce a category of environmentally advanced vehicles, achieving limits equal to 50 per cent of EURO 3. He said that the intention had been to promote clean vehicles by tax incentives and that NG, LPG and electric vehicles would in principle qualify. However, he noted that there was also at least one petrol-fuelled engine qualifying as well.

OTHER BUSINESS

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

Documentation: TRANS/WP.29/GRPE/1998/14; TRANS/WP.29/1998/32; informal documents Nos. 1 and 2 of the annex to this report.

32. The proposal and justification given by ENGVA was noted for introducing non-methane limits for NG-fuelled vehicles (TRANS/WP.29/GRPE/1998/14 and informal documents Nos. 1 and 2 - see also para. 13 above). The expert from the EC informed GRPE that a parallel proposal should be considered in the Community within the next full amending procedure for Directive 70/220/EEC, which was due in mid-1999. With respect to the necessary alignment between Regulation No. 83 and the Directive, the Meeting of Experts agreed in principle to amend the Regulation when the results of consideration of this proposal in the EC would be known.

33. Considering the proposal for the draft 04 series of amendments to Regulation No. 83 (TRANS/WP.29/1998/32), some editorial corrections were given to the secretariat by the expert from the United Kingdom for transmission to WP.29 for its one-hundred-and-fifteenth session.

Note by the secretariat: An informal document (No. 12) was distributed during the WP.29 session and later published as TRANS/WP.29/1998/32/Add.1 (TRANS/WP.29/638, para. 72 and 73).

34. Referring to Supplement 1 to the 03 series of amendments (entered into force 14 May 1998, document TRANS/WP.29/581 and Corr.1), the expert from OICA indicated his intention to prepare for consideration at the next session an amendment extending the application to vehicles N1 < 2,800 kg.

(b) Proposal for a draft Regulation concerning the specific equipment of motor vehicles fuelled by compressed natural gas (CNG)

Documentation: TRANS/WP.29/1998/33; informal document No. 17 of the annex to this report.

35. The secretariat informed GRPE that the document containing the draft Regulation (TRANS/WP.29/1998/33) had not yet been published, awaiting the completion of translations into French and Russian.

36. The editorial corrigenda proposed in informal document No. 17 were noted. In addition, the expert from OICA drew the attention of GRPE to paragraph 6.3.1.4. of the draft Regulation, stating that other technical solutions could be alternative to the excess flow valve. He said that this paragraph should therefore rather specify the function of the device, not its construction. He also noted that, in his recollection, in paragraph 17.4.3. it had been agreed that the value of 250 mm should read 200 mm; this was confirmed by the expert from France. Expecting the adoption of the draft Regulation by WP.29 and the respective vote by AC.1 at its tenth session (November 1998), the Meeting of Experts agreed to resume consideration of the corrigenda to this draft Regulation at its thirty-seventh session.

Note by the secretariat: Upon invitation by WP.29 at its one-hundred-and-fifteenth session (TRANS/WP.29/638, para. 77), more substantial proposals for amendments and corrigenda to document TRANS/WP.29/1998/33 were received from the experts from Finland and Greece and later published as documents TRANS/WP.29/1998/64 and TRANS/WP.29/1998/68, for consideration by WP.29 at its one-hundred-and-sixteenth session (November 1998).

37. The expert from the United Kingdom informed GRPE that, in the European

Community, there was a political need to introduce type approval of NG-fuelled vehicles, although the preparation of a new Directive, parallel to the proposed draft Regulation would most likely be a lengthy procedure. He said that currently the approvals of NG vehicles were only possible by individual countries.

(c) Replacement catalytic converters for vehicles with OBD

38. Consideration of this item was deferred to the thirty-seventh session.

(d) Particulate emissions

Documentation: Informal documents Nos. 10 and 11 of the annex to this report.

39. The Chairman of the informal meeting on particulate emissions (see para. 2 above) informed GRPE that even though there had been no formal presentation or discussion paper(s) originally foreseen for this informal meeting (TRANS/WP.29/GRPE, para. 51), the exchange of views focused on the items which had been proposed and helped to clarify some issues of concern. He said that, both in the technical and medical fields, research continued to define the ways in which particles should be measured and regulated and that, at this stage, the information needed to be gathered before making any decisions.

40. To support the development, a Web site had been set up by the US Environmental Protection Agency, facilitating the exchange of information. Its address and examples of the information available were distributed (informal document No. 10). The expert from the United States of America said that fifteen links had already been provided in this Web site, expanding the information. A number of experts taking part in the discussion agreed to provide for this site the links to sites containing the results of their work and any additional appropriate information.

41. The expert from CONCAWE drew attention to a recently published CONCAWE report on particulates. He recalled that 3 diesel and 3 petrol fuelled passenger car emissions had been measured at four different sites. The data reduction had shown that at high speed the positive-ignition combustion emitted the total number of particulates comparable with the compression-ignition system and that the overall fuel effect was relatively small. He agreed to provide the link to the CONCAWE Web site and, through the secretariat, at least some copies of the report.

42. The expert from Switzerland presented informal document No. 11, suggesting a mandate to ISO/TC22/SC5/WG7 "Vehicle preconditioning for inspection and maintenance exhaust emission test (diesel)" for developing a new particulate measurement method, recording the number and size of emitted particles. To illustrate the proposal, he presented a number of slides from the research done at the Swiss Federal Laboratories for Materials Testing and Research (EMPA). Noting the Swiss proposal, the experts from Sweden and the United States of America informed GRPE that, in their countries, particulate measurement methods were also being studied. In addition, it was recalled that the Auto-Oil Programme II and the WHDC programme also had particulate studies included. It was therefore considered premature by the experts participating at the informal meeting to focus on one possible method only.

43. To provide an opportunity for a further exchange of views, the expert from Italy offered to organize a seminar in Naples, with the participation of experts from industry, environment protection and most likely also from

medical research. This initiative by Italy was supported by a number of experts and a steering committee was formed composed of the experts from the European Community, Germany, Italy, Sweden, United Kingdom, United States of America, Sweden, OICA and CONCAWE to organize a seminar in mid-1999.

44. The Meeting of Experts agreed that the informal discussion of particulate emissions should be resumed during the thirty-seventh session, expecting that some information might at that time be available from the seminar steering committee.

(e) Regulation No. 96 (Emissions of agricultural and forestry tractors)

Documentation: Informal document No. 7 of the annex to this report.

45. The expert from the Czech Republic introduced the proposal and informed GRPE that after a preliminary exchange of views only its second part (amendment to Annex 2, item 2) should be considered.

46. The secretariat was requested to distribute the relevant part of the document with an official symbol for consideration at the next session. The experts from the EC and from EUROMOT agreed to check if the proposal would not cause any departure from the present alignment of Regulation No. 96 with Directive 97/68/EC.

AGENDA FOR THE NEXT SESSION

47. For the thirty-seventh session, planned to be held at Geneva from Tuesday 12 January (14.30 h) to Friday 15 January (12.30 h) 1999, the Meeting of Experts agreed to continue with the scheme of two separate informal meetings incorporated in the agenda and provided with the interpretation services:

(a) Informal meeting on particulate emissions

To be held at Geneva, on Tuesday 12 January 1999 (14.30 h to 17.30 h), with the discussion focusing on:

1. The exchange of information in the field of particulate matter emissions
2. Preparation of the seminar (see paras. 42 and 43 above).

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

To be held at Geneva, on Wednesday 13 January 1999 (9.30 h to 17.30 h). The agenda of the session will be prepared and distributed to the WHDC members prior to the meeting.

(c) Thirty-seventh session of GRPE proper

To be held at Geneva, from Thursday 14 January (9.30 h) to Friday 15 January (12.30 h) 1999. 2/ The following agenda was agreed:

1. Regulation No. 49 (Emissions of compression-ignition engines)
 - 1.1. Development of the emission testing procedure

- 1.2. Approval of vehicles equipped with LPG- and NG-fuelled engines
- 1.3. Reference fuels
2. ECE Regulations concerning the LPG- and NG-fuelled vehicles/engines
 - 2.1. Regulation No. 67 (Equipment for liquefied petroleum gas)
 - 2.2. Draft Regulation concerning the specific equipment of motor vehicles fuelled by compressed natural gas (CNG)
 - 2.3. Proposal for a draft Regulation concerning retrofit systems for LPG and CNG
3. Perspectives in transport and the environment
 - 3.1. Technical requirements on vehicles after the year 2000
 - 3.2. Reduction of carbon dioxide emissions and fuel consumption.
4. Exchange of information on national and international requirements on emissions 3/
5. Other business
 - 5.1. Regulation No. 83 (Emissions of M₁ and N₁ categories of vehicles)
 - 5.2. Regulation No. 96 (Emissions of agricultural and forestry tractors)
 - 5.3. Replacement catalytic converters for vehicles with OBD
 - 5.4. Particulate emissions

2/ As part of the secretariat's efforts to reduce expenditure, all the official documents distributed prior to the session by mail 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.

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

Annex

LIST OF INFORMAL DOCUMENTS DISTRIBUTED WITHOUT A SYMBOL DURING THE SESSION

No.	Transmitted by	Agenda item	Language	Title
1.	ENGVA	1.2. 6.1.	E	Natural gas vehicles and their impact on global warming
2.	ENGVA	1.2. 6.1.	E	A case for the development of a non-methane hydrocarbon standard
3.	Netherlands	1.2.	E	Draft Corrigendum 2 to Supplement 1 to the 02 series of amendments to Regulation No. 49
4.	Netherlands	1.3.	E	Proposal for the LPG reference fuels in Regulation No. 49
5.	Italy	2.	E	Proposal for draft amendments to document TRANS/WP.29/1998/31
6.	Poland	3.	E	Comments to proposal for a draft Regulation on LPG and CNG retrofit systems (Documents TRANS/WP.29/GRPE/R.279 and TRANS/WP.29/GRPE/1998/12)
7.	Czech Republic	6.5.	E	Proposal for draft amendments to Regulation No. 96
8.	Greece	2.	E	Additional remarks on docs. TRANS/WP.29/R.808 and TRANS/WP.29/1998/31 and Informal document No. 5 of Italy
9.	OICA	2.	E	OICA proposed additional amendments to "Proposal for draft Supplement 2 to Regulation No. 67" (TRANS/WP.29/1998/31)
10.	United States of America	6.4.	E	Collection of papers: (1) EPA Resource Information - Office Of Mobile Sources On The World Wide Web http://www.epa.gov/OMSWWW/ (2) Tier 2 Study (Light duty vehicle emissions for 2004 model year); (3) Automakers Petition EPA for Sulphur Limits in Gasoline (EPA Press Release, 19 March 1998 plus an EPA staff paper); (4) Diesel Exhaust: A Critical Analysis of Emissions, Exposure and Health Effects (Summary of a Health Effects Institute Special report, October 1997)
No.	Transmitted by	Agenda item	Language	Title
11.	Switzerland	6.4.	E	Swiss proposal concerning the measurement method of diesel particles

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| 12. | Germany | 1.3. | E | Proposal for draft amendments to Regulation No. 49 |
| 13. | Japan | 5. | E | Movements in Japan concerning motor vehicle exhaust emission reduction and fuel efficiency |
| 14. | Italy | 3. | E | Proposal of amendments to document No. TRANS/WP.29/GRPE/R.279 |
| 15. | European Commission | 5. | E | Auto-Oil II Programme - Contact Group Meeting, 18 May 1998: Overview Report |
| 16. | Italy | 2. | E | Proposal of redactional amendments to document No. TRANS/WP.29/1998/31 |
| 17. | Italy | 6.2. | E | Proposal of redactional amendments to document No. TRANS/WP.29/1998/33 |
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