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Working Party on the Construction of Vehicles

Working Party on Noise (GRB)

REPORT OF THE WORKING PARTY ON NOISE (GRB)
ON ITS TWENTY-NINTH SESSION

(24 and 25 September 1998)

1. GRB held its twenty-ninth session on 24 and 25 September 1998 under the chairmanship of Mr. Löffelholz (Germany). Experts from the following countries participated in the work: Czech Republic; France; Germany; Hungary; Italy; Netherlands; Norway; Poland; Romania; Russian Federation; Slovakia; Spain; Sweden; Switzerland; United Kingdom; United States of America. Representatives of the European Commission (EC) participated. Representatives of Japan took part in the session under paragraph 11 of the Commission's Terms of Reference. Experts from the following non-governmental organizations took part in the session: International Organization for Standardization (ISO); International Organization of Motor Vehicle Manufacturers (OICA); International Motorcycle Manufacturers Association (IMMA); European Tyre and Rim Technical Organization (ETRTO).

2. The documents without a symbol distributed during the session are listed in the annex to this report.

TYRE-ROAD NOISE LIMITATION

(a) Regulation No. 30 (Pneumatic tyres)

Documentation: TRANS/WP.29/GRB/R.140; TRANS/WP.29/GRB/R.144;
TRANS/WP.29/GRB/1998/3; TRANS/WP.29/GRB/1998/5/Rev.1; TRANS/WP.29/GRB/1998/8;
informal document No. 5 of the annex to this report.

3. GRB agreed to base its considerations on a parallel proposal for Regulation No. 54 (see paras. 5-20 below) and requested the secretariat to prepare a consolidated version incorporating documents TRANS/WP.29/GRB/R.140, TRANS/WP.29/GRB/1998/5/Rev.1 and the amendments agreed during the session for the parallel proposal relating to tyres for commercial vehicles (see para. 20 below).

4. Informal document No. 5 was also considered in conjunction with Regulation No. 54 (see para. 5 below). Consideration of the amendments proposed by the Russian Federation (TRANS/WP.29/GRB/1998/8) was deferred to the next GRB session.

(b) Regulation No. 54 (Pneumatic tyres for commercial vehicles)

Documentation: TRANS/WP.29/GRB/R.141; TRANS/WP.29/GRB/R.144;
TRANS/WP.29/GRB/1998/3; TRANS/WP.29/GRB/1998/6/Rev.1; TRANS/WP.29/GRB/1998/9;
informal document No. 5 of the annex to this report.

5. Document TRANS/WP.29/GRB/1998/6/Rev.1 related to the test method was considered in detail and in conjunction with document TRANS/WP.29/GRB/R.141. Consideration of the amendments proposed by the Russian Federation (TRANS/WP.29/GRB/1998/9) was deferred to the next GRB session.

6. The expert from the European Community informed GRB that a Council meeting had been held in Brussels with the aim of examining the "Proposal for a European Parliament and Council Directive amending Council Directive 92/23/EEC relating to tyres for motor vehicles and their trailers and to their fittings" which contained in Annex 5 prescriptions concerning Tyre/Road noise emissions. He said that no common position had been reached among EC Member States and that only the administrative provisions were examined in detail. He invited GRB to continue in its technical work and suggested that its results should later be considered in the EC.

7. The expert from Germany confirmed that in the EC no technical discussion had taken place and that two documents distributed by his delegation had not been examined. He said that the proposals reflect the progress made in the Working Party and that they were presented in order to align the prescriptions of the proposed Directive (see para. 6) to those to be agreed for Regulations Nos. 30 and 54. He confirmed that in his proposals the tyre/road noise limits remained based on the tyre load index instead of the nominal section width.

8. The Chairman expressed his view that GRB was the appropriate forum to achieve wider technical harmonization and that he wished to present results of the work made in GRB to the EU Council during the German presidency (first semester of 1999).

9. The expert from the ETRTO reiterated the opinion of his organization that the tyre/road noise would best be addressed by a separate new Regulation (see documents TRANS/WP.29/GRB/R.144 and TRANS/WP.29/GRB/1998/3). Referring to document TRANS/WP.29/GRB/1998/6/Rev.1 (see para. 5 above), he noted that, in some cases, it was not clearly shown whether a prescription referred to safety or noise matters. Therefore he proposed, wherever necessary, to better distinguish definitions relating to noise from those relating to safety. In particular, he requested GRB to clearly define a type, size and range of tyres

with respect to noise and to clarify the administrative procedures concerning granting of type approval and concerning transitional provisions.

10. The experts from France, Italy, Spain and United States of America supported the ETRTO point of view and expressed the opinion that a separate Regulation would be preferable to the proposed amendments to Regulations Nos. 30 and 54, because this would eliminate many administrative and technical problems. In addition, the expert from United States of America said that, in view of a global harmonization, the test track specifications and the test methodology should be revised. The expert from Sweden supported the original proposal under consideration. However, since many delegations had not expressed their official position on this matter, the Chairman suggested to continue to examine the two proposals amending Regulations Nos. 30 and 54 with particular regard to technical matters and to take a decision at a later stage.

11. It was agreed that, in order to find a suitable definition of a type of tyre regarding noise, it would be desirable that experts from GRB and GRRF could meet in order to find a solution to be submitted to next GRB session.

12. The expert from OICA recalled the reservations made during the previous session (see informal document No. 6 distributed during the twenty-eighth session) and confirmed the opinion of his organization that the tyre/noise limitation along the proposals under consideration could not effectively reduce the overall vehicle noise. In particular, he pointed out that the proposed test vehicle requirements are extremely imprecise and likely to lead to a considerable variation in the measured noise levels during tests carried out by the different laboratories.

13. The expert from France informed GRB that, in the future, new types of commercial vehicle tyres having a much wider section will be put on the market in order to replace those intended for dual mounting (twinning). He expressed the intention of his delegation to present at the next GRB session an explanatory document in order to insert this type of tyre in the proposal under consideration.

14. The expert from Sweden gave a presentation concerning "the effectiveness of the proposed EU Directive". He pointed out that, from the date of the entry into force of tyre/noise prescriptions in the EC, it will take at least a decade to replace 50 per cent of tyres with those meeting the proposed EC noise limits and that, in his view, during this period of time no significant reduction in noise would be achieved. He therefore suggested that GRB should

not follow what has been proposed in the EC as regards the reduction by 1 dB(A) of noise results (in order to take account of any instrument inaccuracies).

15. The expert from OICA recognized that it would take time before achieving a significant tyre/noise reduction but he said that this problem could not be solved by the elimination of 1 dB(A) reduction to which the industry had been used for many years.

16. The expert from the United States of America expressed a reservation on the criteria proposed for the evaluation of noise results and said that, in his view, it was not in line with the future global regulatory system. In this respect, he informed GRB that, at the next session of WP.29, the United States of America intends to propose a new policy for the activities of the Working Parties subsidiary to WP.29.

17. The Chairman reminded GRB that noise limits represent a political question that will be discussed and agreed in the European Parliament. Therefore he suggested not to take any decision regarding prescriptions on noise limits and test results corrections and to await the decision of the EC.

18. The expert from Sweden gave a further presentation of a study concerning the relation between noise emissions, friction and rolling resistance of car tyres (informal document No. 5). He said that, according to the first results of this investigation, there seemed to be no significant conflict between the above parameters, and that the establishing of tyre/road noise was not likely to sacrifice wet friction or rolling resistance of future tyres.

19. The expert from the United Kingdom recalled that the relation between noise and safety had also been studied in his country. However, he said that his major concern was small tyre manufacturers with limited resources who, in order to meet both noise and safety requirements, could compromise tyre safety.

20. GRB agreed to resume this subject at its next session and requested the secretariat to prepare a consolidated working document incorporating documents TRANS/WP.29/GRB/R.141, TRANS/WP.29/GRB/1998/6/Rev.1 and the amendments agreed during the session. It was also agreed that the parallel proposal relating to tyres for passenger cars would be amended consequently (see para. 3 above).

AMENDMENTS TO REGULATION No. 51 (Noise of M and N categories of vehicles)

Documentation: Informal documents Nos. 1 and 2 of the annex to this report.

21. Informal document No. 2 was presented by the expert from Japan. He informed GRB that Japan's Urban Mode Measuring Method had been compared with the German (FIGE) method and with the emission test modes used in Japan, United States of America and Europe. The main results obtained by this comparison showed that for passenger cars the driving conditions for Japan's Urban Mode Measuring Method were similar to those of the emission test modes of Japan, United States of America and Europe, and that the FIGE test was closer to Japan's Urban Mode Measuring Method in engine speed and noise levels, than the ISO 362 method.

22. The expert from Germany confirmed that the data resulting from research conducted at FIGE (informal document No. 1) had shown a good correlation with those presented by Japan. He also said that a final report would be made available at the next session of GRB.

23. The expert from OICA recommended that if a change of the testing methods (e.g. test track characteristics, position of microphone etc.) would affect the noise limits, they should be established after having carried out "round

robin tests" at different test sites.

24. The expert from Sweden said that, in his opinion, the driving cycle for noise testing should be reviewed on the basis of a harmonized test cycle emission which was now being studied in cooperation with the United States of America. He also highly evaluated the report presented by the expert from Japan.

25. The expert from the United States of America said that, in his opinion, noise emission results should be based on the "worst case" conditions in order to take into account also "aggressive driving". In this respect, the expert from ISO replied that the worst case had been abandoned after being used for about twenty years since it was realized that the extreme driving conditions (full opened throttle) represented only 4 per cent of actual driving behaviour.

26. The expert from ISO informed GRB that, within the framework of SC1/TC 41, a Working Group (WG 42) had been established in order to revise the ISO 362 standard and had met already three times. He said that ISO would look to both European and Japanese information and that work was in progress. Following a request made by the Chairman, the ISO expert said that the technical requirements of the EC Directive 92/97/EEC would probably be modified in the future on the basis of the revised ISO 362 standard and that a meeting with a representative of the European Commission (DG III) had been planned in order to provide all the necessary information on the work carried out by ISO.

27. The Chairman requested the expert from Germany to provide, for the next GRB session, a working document which would also take into account the contribution from Japan (see para. 21 above). The expert from ISO was also requested to present a document concerning the results achieved in ISO activities on noise testing. Both documents will constitute a basis for developing new proposals to amend Regulation No. 51.

AMENDMENTS TO REGULATION No. 59 (Replacement silencing systems)

Documentation: TRANS/WP.29/GRB/1998/10.

28. The expert from Poland introduced a proposal for incorporating into paragraph 1 of the Regulation a reference to Regulation No. 103 (TRANS/WP.29/1998/10). The above proposal would ensure that replacement silencing systems comprising catalytic converters have to be approved according to Regulation No. 103. GRB agreed to reconsider this subject at the next session.

AMENDMENTS TO REGULATION No. 63 (Noise of mopeds)

Documentation: TRANS/WP.29/GRB/1998/11.

29. The secretariat informed the participants that the proposal had been received by mail from Belarus and introduced document TRANS/WP.29/1998/11. He then invited the experts to express their opinions on the proposed amendments to Regulation No. 63 in order to reflect them in the report.

30. The expert from France noted that the proposal to amend paragraph 2.2.3. of Regulation No. 63 would align it to the corresponding prescriptions of the EC Directive 97/24/EC. The expert from IMMA said that, in his view, the proposed new definitions of exhaust system needed to be clarified since they had never appeared before in the ECE terminology.

31. GRB adopted the proposed amendment relating to paragraph 2.2.3 but

agreed to await the finalization of the remaining part of the proposal before submitting it to WP.29. In this respect, the secretariat was requested to ask the experts from Belarus to provide GRB with more detailed explanation.

DEFINITION OF TESTING PROVISIONS IN NOISE REGULATIONS

Documentation: Informal document No. 8 distributed during the twenty-eighth session of GRB.

32. The expert from the Czech Republic recalled his presentation made during the previous session where he had presented a synopsis of international and national testing provisions, comparing the methods and specifications defined in ECE noise Regulations, EC noise Directives, ISO noise draft Standards and the noise test procedure for motor vehicles in Japan. He explained the reasons why harmonized prescriptions among noise rules were desirable with particular regard to the arrangements, method of testing, requirements and interpretations of results and suggested that Regulations Nos. 41 and 63 should be aligned with EC Directive 97/24/EC. The expert from IMMA agreed with this suggestion and recalled his proposal contained in document TRANS/WP.29/GRB/1998/14, discussed under agenda item 7.1. (see para. 36 below).

33. The Chairman thanked the expert from the Czech Republic for the work produced and expressed the intention of GRB to continue in the process of harmonization as started in the past. He also suggested that this subject need not be discussed further in the future GRB meetings.

EXCHANGE OF INFORMATION ON NATIONAL AND INTERNATIONAL REQUIREMENTS ON NOISE LEVELS

Documentation: Informal documents Nos. 3 and 4 of the annex to this report.

34. The expert from Japan informed GRB that in May 1998 a "Survey Committee of Actual Tyre-Road Noise" had been established in order to consider the efficiency and the necessity of introducing tyre/noise regulation in Japan (informal document No. 3). A final report of this research was expected to be issued for the year 2000.

35. The expert from Japan introduced informal document No. 4 and informed GRB that, in order to further reduce noise emitted from vehicles, Japan intended to partially revise its Safety Regulations for Road Vehicles Concerning Motor Vehicle Noise. Therefore, the noise standards for certain categories of vehicles (buses with mass exceeding 3.5 t and maximum power not exceeding 150 kW, small-sized trucks with maximum mass between 1.7 t and 3.5 t and cab-over type mini sized trucks) will be strengthened. The planned revision of the relevant noise regulations will be notified by the Japanese Government to the World Trade Organization (WTO) and its enforcement should take effect in October 2000.

OTHER BUSINESS

(a) Amendments to Regulation No. 41 (Noise of motor cycles)

Documentation: TRANS/WP.29/GRB/1998/13; TRANS/WP.29/GRB/1998/14.

36. The expert from IMMA introduced document TRANS/WP.29/GRB/1998/14 which was prepared in order to align Regulation No. 41 with the corresponding EC Directive 97/24/EC. The expert from the United Kingdom sought clarifications concerning some paragraphs. The Chairman invited all the experts to address their comments to IMMA who, if necessary, will present at the next session an addendum to the original proposal.

37. The expert from the Czech Republic noted that the proposal to amend Regulation No. 41, contained in document TRANS/WP.29/GRB/1998/13, had been taken into account by the IMMA proposal so that no further discussion was deemed necessary.

(b) Proposal for a Global Agreement

38. The secretariat informed GRB that, at its one-hundred-and-fifteenth session (23-26 June 1998), WP.29 had formally adopted the text of the Agreement, comprised of documents ECE/TRANS/132 and Corr.1 (English only).

39. WP.29 was addressed by many speakers representing the European Community, national administrations and non-governmental organizations, all of them considering the Agreement as a major step in the efforts of Governments and industry to achieve international harmonization of vehicle regulations (TRANS/WP.29/638/Add.1).

40. As requested by WP.29, the Agreement was opened for signature on 25 June 1998 and signed by Ambassador G.E. Moose on behalf of the Government of the United States of America. The Agreement will remain open for signature until its entry into force (specified in Article 11) and is available during this period in Geneva (TRANS/WP.29/638, paras. 25 to 40). It was expected that, in the future, other Governments (e.g. the European Community, Japan, Australia, South Africa) will sign the Agreement.

(c) Traffic noise modelling

41. The expert from ISO informed GRB that development of the computer model of community noise continued and that its improved version should take into account e.g. road surface absorption, to provide better prediction of community noise levels. As already expressed during the previous meetings, he invited the delegates to contact the University of Central Florida and provide comments as appropriate (TRANS/WP.29/GRB/24, para. 39).

AGENDA FOR THE NEXT SESSION

42. The following agenda was agreed for the thirtieth session, (Geneva, 22 February (14.30 h) to 25 February (12.30 h) 1999) 1/:

1. Tyre-road noise
 - 1.1. Amendments to Regulation No. 30 (Pneumatic tyres)
 - 1.2. Amendments to Regulation No. 54 (Pneumatic tyres for commercial vehicles)
2. Amendments to Regulation No. 51 (Noise of M and N categories of vehicles)
3. Amendment to Regulation No. 59 (Replacement silencing systems)
4. Amendments to Regulation No.63 (Noise of mopeds)
5. Amendments to Regulation No.41 (Noise of motor cycles)
6. Exchange of information on national and international requirements on noise levels 2/
7. Other business
 - 7.1. Traffic noise modelling

1/ 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.

2/ Delegations are invited to submit brief statements on the latest status in national requirements (if applicable) 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
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1.	Germany	2.	E	Investigations on Improving the Method of Noise Measurement for Powered Vehicles.
2.	Japan	2.	E	Study on Pass-by Noise Testing Methods Incorporating Urban Driving Conditions.
3.	Japan	6.	E	Action of Japan Toward Tyre-Road Noise Regulation.
4.	Japan	6.	E	WTO Notification Regarding Partial Revision of the Safety Regulations for Road Vehicles Concerning Motor Vehicle Noise.
5.	Sweden	1.1. 1.2	E	Relation Between Noise Emission, Friction and Rolling Resistance of Car Tyres - A Pilot Study.
