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**ECONOMIC COMMISSION FOR EUROPE**

**INLAND TRANSPORT COMMITTEE**

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

Working Party on Noise (GRB)

**REPORT OF THE WORKING PARTY ON NOISE (GRB)  
ON ITS FORTY-SECOND SESSION**

(5 to 7 September 2005)

**ATTENDANCE**

1. GRB held its forty-second session on 5 to 7 September 2005 in Geneva, under the chairmanship of Mr. Ch. Theis (Germany). 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): Czech Republic; France; Germany; Italy; Japan; Netherlands; Norway; Republic of Korea; Russian Federation; Slovakia; Spain; Sweden; Switzerland; United Kingdom; United States of America. Representatives of the European Commission (EC) participated. Experts from the following non-governmental organizations also participated: International Organization for Standardization (ISO); International Organization of Motor Vehicle Manufacturers (OICA); International Motorcycle Manufacturers Association (IMMA); European Association of Automobile Suppliers (CLEPA); European Tyre and Rim Technical Organization (ETRTO); Specialty Equipment Market Association (SEMA); Bureau International Permanent des Associations de Vendeurs et Rechapeurs de pneu (BIPAVÉR).

2. The documents without a symbol distributed during the session are listed in Annex 1 to this report.

1. 1958 AGREEMENT: AMENDMENTS TO EXISTING UNECE REGULATIONS

1.1. Regulation No. 41 – (Noise of motorcycles)

1.1.1. Development

3. The expert from Italy, Mr. A. Erario, chairing the informal working group on motorcycle noise emissions, informed GRB about the group's progress of work and the results of the fourth meeting held in Milwaukee (United States of America) on 25 and 26 August 2005. He added that the agenda, working papers and reports of that informal meeting could be consulted on the WP.29/GRB informal group's website address:

<http://www.unece.org/trans/main/wp29/wp29wgs/wp29grb/R41-4th.html>.

4. GRB agreed with Mr. Erario's suggestion to hold the next informal meeting from 20 to 21 February 2006 in Geneva, prior to the forty-third GRB session (see para. 37 (a)).

1.2. Regulation No. 51 – (Noise of M and N categories of vehicles)

Documentation: Informal document No. GRB-42-1 of Annex 1 to this report.

5. The expert from the Russian Federation introduced GRB-42-1, stressing the need to insert some durability requirements into certain UNECE Regulations, particularly in Regulation No. 51. GRB welcomed that proposal. However, the experts from Germany, the United Kingdom and OICA were of the opinion that, at the present time, there was no evidence for the introduction of such requirements. GRB agreed to keep the document on its agenda and to take a final decision at its next session.

1.2.1. Development

Documentation: TRANS/WP.29/GRB/2005/2/Rev.2; TRANS/WP.29/GRB/2005/5; informal documents Nos. GRB-42-2, GRB-42-3, GRB-42-4, GRB-42-5, GRB-42-10, GRB-42-11, GRB-42-13 and GRB-42-14 of Annex 1 to this report.

6. GRB followed with interest a presentation by the expert from the United Kingdom (GRB-42-11) regarding regulatory impact assessment of new vehicle noise test. The expert from Germany introduced GRB-42-10 regarding different scenarios for the implementation of the new test method for noise measurement into Regulation No. 51.

7. GRB considered in detail TRANS/WP.29/GRB/2005/5 superseding TRANS/WP.29/GRB/2005/2/Rev.2. Referring to the decision of WP.29 during its one-hundred-and-thirty-sixth session (TRANS/WP.29/1041, para. 74), the EC expert raised a scrutiny reservation with regard to the proposed scope, in particular to the new test method. GRB adopted TRANS/WP.29/GRB/2005/5 with the amendments as reproduced in Annex 2 to this report.

8. The secretariat was requested to submit the adopted text to WP.29 and AC.1, as a proposal for Supplement 4 to the 02 series of amendments to Regulation No. 51, for consideration during their March 2006 sessions.

9. The expert from Germany introduced GRB-42-5 on the need of additional sound emission provisions.

10. For the further development, GRB agreed to elaborate additional sound emission provisions for M1 and N1 categories of vehicles, and to continue, in parallel, the elaboration of limit values for the new test method adopted. Once GRB would agree on the new limit values, the new test method, the additional sound emission provisions and the new limit values will be adopted as a new series of amendments to Regulation No. 51.

11. The Chairman volunteered to prepare, for the next WP.29 session in November, together with the experts from OICA, a presentation concerning the procedure on how to insert the new test method for noise measurement into the Regulation.

12. The Chairman of the informal group on Regulation No. 51 presented GRB-42-2 proposing new sound level limits for vehicles of categories M1 and N1. GRB agreed on the proposal, with the following amendments:

Paragraph 6.2.2.6., the table, stages 2 and 3, figures "72" and "71" amend to read "73" and "72", respectively.

13. The secretariat was requested to distribute the document, with an official symbol, for consideration at the next GRB session.

14. The Chairman of the informal group also introduced GRB-42-3 on the summary of discussions about sound limit values for vehicles of categories other than M1 and N1. GRB agreed to resume consideration of this subject at its next session, on the basis of an enlarged data base.

15. With regard to tyre selection requirements, the expert from the Netherlands pointed out that it was not indicated in the OICA database whether tyres of different brand names or different types (i.e. "traction tyres", "steering tyres") were used. He stressed the need that all these details were essential in order to determine the final noise limit values for the new test method. The expert from OICA volunteered to include these data and to present the updated results during the next GRB session.

16. The expert from the Russian Federation presented GRB-42-4 regarding the need of feasibility studies for the introduction of the new test method for noise measurement. He added that there was not enough evidence that could prove the environmental benefits of the new test method. The EC expert announced that the European Commission would initiate an impact assessment programme in order to evaluate the new test method when necessary test data on the new test method would be available.

17. The expert from the Netherlands introduced GRB-42-13 proposing an interim amendment to Regulation No. 51, awaiting the entry into force of the future 03 series of amendments. GRB took note of that presentation and agreed to resume consideration of this document during its next session.

18. Following the decision taken during its fortieth session (TRANS/WP.29/GRB/38, para. 11), GRB agreed with the Chairman's suggestion to establish a new informal group on additional sound emission provisions (ASEP). GRB elected Mr. B. Kortbeek (Netherlands) as Chairman of the informal group. Mr. Kortbeek thanked GRB for the confidence and suggested that the first meeting of this informal group be held on 24 February 2006 in Geneva (Palais de Nations), after the forty-third GRB session. GRB referred GRB-42-5 to the ASEP informal group (see para. 37 (c)).

19. Mr. Kortbeek also introduced GRB-42-14 proposing the terms of reference and the rules of procedure for the informal group. GRB adopted the document as reproduced in Annex 3 to this report. The GRB Chairman announced his intention to seek WP.29's consent, at the November 2005 session, to establish the above-mentioned informal group.

1.2.2. Stationary test for four-wheelers.

20. The expert from ISO volunteered to prepare a document concerning this issue for consideration at the next GRB session.

1.3. Regulation No. 59 - (Replacement silencing systems)

Documentation: Informal documents Nos. GRB-42-6 and GRB-42-8 of Annex 1 to this report.

21. GRB followed with interest a presentation by the expert from CLEPA regarding a comparison of noise emissions of certain M1 category vehicles according to the current and new test method (GRB-42-6). He underlined that a part of the measurements resulted in an important difference in values and that CLEPA would continue working on a detailed explanation. GRB appreciated this study and agreed to resume consideration of this subject at its next session.

22. The expert from CLEPA introduced GRB-42-8 concerning general principles for a revision of Regulation No. 59. GRB agreed to keep both - the "proximity" and the "drive-by" test methods in the Regulation. Regarding the reproducibility of the "proximity test", GRB also agreed on the need to improve the current test method.

1.4. Regulation No. 92 - (Replacement silencing systems for motorcycles)

Documentation: Informal document No. GRB-42-9 of Annex 1 to this report.

23. Upon the request of WP.29 during its one-hundred-and-thirty-fifth session (TRANS/WP.29/1039, para. 66), GRB considered and adopted GRB-42-9, with the following amendment:

" .... shall fulfil pollution requirements **according to the type approval of the vehicle. The evidence shall be documented in the test report.**"

24. The secretariat was requested to submit the adopted text to WP.29 and AC.1, as a draft Corrigendum 1 to Supplement 2 to Regulation No. 92, for consideration at their November 2005 sessions (see TRANS/WP.29/2005/104).

2. 1997 AGREEMENT: AMENDMENTS TO RULE No. 1

25. GRB noted that no new information has been received on this subject and agreed to align, in a first step, the requirements of Rule No. 1 to the requirements of corresponding European Union (EU) directive 96/96/EC, as amended.

3. CONSIDERATION OF SCOPES AND COMMON DEFINITIONS

Documentation: TRANS/WP.29/GRB/2005/4 and Corr.1.

26. The expert from EC introduced TRANS/WP.29/GRB/2005/4, as corrected by Corr.1. GRB adopted the proposal with the following amendments:

Page 2, item A.3., put the text in square brackets and insert a footnote \*/ to read (see paras. 7 and 8):

" \*//This proposal will become obsolete, if WP.29 adopts TRANS/WP.29/GRB/2005/5, as amended."

Page 4 item A.6., amend to read:

"1. SCOPE

This Regulation **applies to replacement exhaust silencing systems for vehicles of categories L1, L2, L3, L4 and L5.**"

27. The secretariat was requested to submit the adopted document, as amended above, to WP.29 and AC.1, as draft Supplements to Regulations Nos. 9, 41, 51, 59, 63 and 92, for consideration at their March 2006 sessions.

4. LOW FREQUENCY NOISE EMISSIONS

Documentation: Informal document No. GRB-42-12 of Annex 1 to this report.

28. The expert from the Netherlands introduced GRB-42-12 concerning a study on low frequency noise. The study results showed that current noise measurement requirements (using A-filter) led to an underestimation of low frequencies. GRB agreed to resume consideration of this subject at its next session.

5. TYRE ADHESION REQUIREMENTS (WET GRIP)

5.1. Insertion of wet grip requirements into Regulation No. 117 (Tyre noise)

Documentation: TRANS/WP.29/GRRF/2005/11.

29. The expert from the United Kingdom introduced TRANS/WP.29/GRRF/2005/11 regarding the insertion into Regulation No. 117 of new requirements on wet grip adhesion. The main issue of discussion in GRB was whether wet grip requirements should be inserted as an

optional or mandatory basis. The experts from the EC, Germany, the Netherlands and the United Kingdom were of the opinion that wet grip requirements should be mandatory. The expert from the United Kingdom reminded GRB that the initial reason for the insertion of wet grip requirements was to ensure that reduced tyre noise should not compromise wet grip performance of tyres. The expert from BIPAVÉR pointed out that UNECE Regulations were used globally and that there were certain countries with a hot and dry climate where mandatory compliance with wet grip requirements would not be necessary.

30. Following the discussion, a large number of delegations preferred to have a flexible concept, i.e. to insert the wet grip requirements as an optional basis. However, any regional organization, e.g. EU, could make mandatory both requirements for its Member States. The expert from the EC entered a general scrutiny reservation concerning this decision. Another administrative question was raised as to whether an approval concerning wet grip requirements should be delivered by the same Contracting Party, which granted the initial approval on tyre noise requirements. GRB preferred that the same administrative department should grant both approvals. GRB agreed to resume consideration of this subject during its next session. The Chairman expressed his intention to inform the GRRF Chairman and WP.29 about the outcome of GRB discussions.

## 6. ROLLING SOUND REQUIREMENTS FOR RETREADED TYRES

Documentation: Informal document No. GRB-42-7 of Annex 1 to this report.

31. The expert from BIPAVÉR introduced GRB-42-7 concerning the extension of the scope of Regulation No. 117 to retreaded tyres. He informed GRB that, during the next GRB session, BIPAVÉR would prepare a progress report concerning this issue.

## 7. EXCHANGE OF INFORMATION ON NATIONAL AND INTERNATIONAL REQUIREMENTS ON NOISE LEVELS

32. No new information was provided during the session.

## 8. ELECTION OF OFFICERS

33. In compliance with Rule 37 of the Rules of Procedure (TRANS/WP.29/690), GRB re-elected Mr. Meyer (Germany) as Chairman for the GRB sessions scheduled for 2006.

## 9. OTHER BUSINESS

### 9.1. Guidelines for the preparation and submission of documents

Documentation: TRANS/WP.29/1042; TRANS/WP.29/1044.

34. The secretariat introduced TRANS/WP.29/1042 "Guidelines for the preparation and submission of documents to WP.29 and to its subsidiary bodies" and TRANS/WP.29/1044 "General guidelines for UNECE regulatory procedures and transitional provisions in UNECE Regulations". Both documents are available at the following WP.29 website:

<http://www.unece.org/trans/main/welcwp29.htm>

GRB experts were invited to follow these guidelines when preparing a document for submission to GRB or the other Working Parties of WP.29.

9.2. 1998 Agreement and draft gtr on noise

35. The EC expert announced that Germany and the European Commission had volunteered to undertake the technical sponsorship for the elaboration of a draft gtr on vehicle noise emissions on the basis of the new test method of Regulation No. 51. The expert from the United States of America reminded GRB that, during the elaboration of a draft gtr, experts should not limit themselves only to Regulation No. 51, but should also consider other regional standards. GRB agreed with the Chairman's suggestion to establish a new informal group on this subject. The Chairman announced to seek WP.29 and AC.3 consent during their November 2005 sessions. The experts from Germany and EC were invited to prepare the terms of reference of this informal group for consideration at the next GRB session.

9.3. Tributes to Mr. M. Dunne

36. GRB was informed that Mr. Michael Dunne (United Kingdom) was going to take his retirement by the end of November 2005. The Chairman thanked Mr. Dunne for his excellent contribution in the field of environment protection as well as for his active participation during all the sessions since 1979. GRB wished him a long and happy retirement and expressed its appreciation to Mr. Dunne with long applause. Mr. Dunne thanked the group for that appreciation.

10. AGENDA FOR THE FORTY-THIRD SESSION

37. The secretariat proposed the following provisional agenda for the forty-third session of GRB, scheduled to be held in Geneva from 21 (from 13.30h) to 23 (until 17.30h) February 2006 1/:

(a) Informal meeting of the GRB working group on an improved test measurement method for motorcycles

To be held on Monday, 20 February 2006 and Tuesday morning, 21 February 2006. The agenda of the meeting will be prepared by the informal group's secretariat and distributed to the members of the group prior to the meeting. Note by the secretariat: This meeting will be held without interpretation.

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1/ As part of the secretariat's efforts to reduce expenditure, all the official documents as well as the informal documents distributed prior to the session, by mail or placed on the UNECE WP.29 website, will not be available in the conference room for distribution to session participants. Delegates are kindly requested to bring their copies of documents to the meeting. (The WP.29 website address is: <http://www.unece.org/trans/main/welcwp29.htm> select GRB and find "Working Documents" as well as "Informal Documents"). For the translation of the above-mentioned official documents, delegates can now access the new public Official Document System (ODS) at the website address: <http://documents.un.org>

(b) Forty-third session of the GRB proper

To be held from Tuesday afternoon 21 (from 14.30h) to Thursday 23 (until 17.30h) February 2006:

1. 1958 Agreement: Amendments to existing UNECE Regulations
  - 1.1. Regulation No. 41 – (Noise of motorcycles)
    - 1.1.1. Development
  - 1.2. Regulation No. 51 – (Noise of M and N categories of vehicles)
    - 1.2.1. Development
    - 1.2.2. Stationary test for four-wheelers
  - 1.3. Regulation No. 59 – (Replacement silencing systems)
2. 1997 Agreement: Amendments to Rule No. 1
3. 1998 Agreement: Elaboration of a new gtr on noise
4. Low frequency noise emissions
5. Tyre adhesion requirements (wet grip)
6. Rolling sound requirements for retreaded tyres
7. Exchange of information on national and international requirements on noise levels
8. Other business

(c) Informal meeting of the GRB working group on additional sound emission provisions (ASEP)

To be held on Friday, 24 February 2006. The agenda of the meeting will be prepared by the informal group's secretariat and distributed to the members of the group prior to the meeting. Note by the secretariat: This meeting will be held without interpretation.



Annex 1

LIST OF INFORMAL DOCUMENTS **GRB-42-...** DISTRIBUTED WITHOUT AN OFFICIAL SYMBOL DURING THE FORTY-SECOND SESSION OF GRB

| No. | Transmitted by     | Agenda item | Language | Title  | Follow-up |
|-----|--------------------|-------------|----------|--|-----------|
| 1.  | Russian Federation | 1.2.        | E/R      | Concerning development of type approval procedures related to verification of conformity of certified parameters | (a)       |
| 2.  | GRB Inf.Group      | 1.2.1.      | E        | Information paper about sound level limits   | (b)       |
| 3.  | Germany/OICA       | 1.2.1.      | E        | Summary of discussion about limits values for HDV  | (c)       |
| 4.  | Russian Federation | 1.2.1.      | E        | Proposal for further development of the new measurement test method for sound emissions of motor vehicles        | (c)       |
| 5.  | Germany            | 1.2.1.      | E        | Additional Sound Emission Provisions   | (c)       |
| 6.  | CLEPA              | 1.3.        | E        | Comparison of noise test results according to ECE R-51.02 and R-51.03  | (c)       |
| 7.  | BLIC/BIPAVER       | 6.1.        | E        | Retreaded Tyres - Tyre to road rolling sound emissions   | (c)       |
| 8.  | CLEPA              | 1.3.        | E        | Principles of Revision of ECE Regulation No. 59  | (c)       |
| 9.  | Secretariat        | 1.4.        | E        | Proposal for Corrigendum 1 to draft Supplement 2 to Regulation No. 92 (RESS)                                     | (d)       |
| 10. | Germany            | 1.2.1.      | E        | Different scenarios for the implementation of the new test method  | (c)       |
| 11. | United Kingdom     | 1.2.1.      | E        | Regulatory impact assessment of new vehicle noise test   | (c)       |
| 12. | Netherlands        | 4.1.        | E        | Low frequency noise  | (a)       |
| 13. | Netherlands        | 1.2.1.      | E        | Proposal for interim amendment of Regulation No. 51.02   | (a)       |
| 14. | Netherlands        | 1.2.1.      | E        | GRB informal group on Regulation N. 51, Annex 10   | (c)       |

Note:

- (a) Continue consideration at the next GRB session as an informal document.
- (b) Continue consideration at the next GRB session as an official working document.
- (c) Consideration completed or to be superseded.
- (d) Adopted and to be submitted to WP.29.

Annex 2

AMENDMENTS ADOPTED TO TRANS/WP.29/GRB/2005/5  
(see para. 7 of the report)

Page 3, paragraphs 1. and 2., amend to read:

"1. SCOPE

This Regulation applies to vehicles of category M and N with regard to noise. It contains, in its:

Part A:

provisions relating to the noise emitted by vehicles of category M and N.

Part B:

a test method intended to reproduce the sound levels, which are generated by vehicles during normal driving in urban traffic. Part B will be applicable once Part A, including the limit values, has been adapted to the new test measurement method contained in Part B.

Part A

2. DEFINITIONS

.... "

Page 4, paragraph 1.1., replace the text with "(Reserved)".

Page 6, paragraph 2.2., amend to read:

"2.2.  $M_{1b}$ , are  $M_1$  vehicles with a PMR exceeding 120 and not exceeding 200."

Page 8, paragraphs 8.2. to 8.2.2., amend to read:

"8. For vehicles of categories  $M_2 > 3.5$  t,  $M_3$ ,  $N_2$  and  $N_3$ :

- |        |                                 |                             |
|--------|---------------------------------|-----------------------------|
| 8.2.1. | Engine speed in gear i at:      | $BB' \dots \text{min}^{-1}$ |
| 8.2.2. | Engine speed in gear (i+1) at:  | $BB' \dots \text{min}^{-1}$ |
| 8.2.3. | Vehicle speed in gear i at:     | $BB' \dots (\text{km/h})$   |
| 8.2.4. | Vehicle speed in gear (i+1) at: | $BB' \dots (\text{km/h})"$  |

Page 13, paragraph 2.2.2., in the first line, replace "axle" with "vehicle".

Annex 3

TERMS OF REFERENCE AND RULES OF PROCEDURE FOR THE GRB INFORMAL  
GROUP ON ADDITIONAL SOUND EMISSION PROVISIONS (ASEP)

(see para. 19 of the report)

TERMS OF REFERENCE

1. The informal group shall prepare a draft proposal for Additional Sound Emission Provisions (for M1 and N1 vehicles only) to be included in the draft amendment to Regulation No. 51 (Noise emissions from M and N vehicles), for consideration by GRB.
2. The basis of the discussion will be TRANS/WP.29/GRB/2005/2/Rev.2, as amended by TRANS/WP.29/GRB/2005/5. Additional Sound Emission Provisions refer to paragraph 6.2.3. and Annex 10.
3. The informal group shall develop a complementary test method and evaluation criteria for insertion into Annex 10. The complementary test method shall cover the noise emission under higher engine speeds and loads than the proposed procedure in TRANS/WP.29/GRB/2005/5, as amended.
4. In its work, the informal group will take into consideration the technical expertise of ISO and OICA, as well as, the discussions in GRB informal group on Regulation No. 51 and the discussions in GRB on amendment of Regulation No. 59 (Noise of replacement exhaust silencers).
5. The target completion date for the informal group shall be the forty-fourth session of GRB in September 2006.

RULES OF PROCEDURE

1. The informal group is open to all participants of GRB. A maximum of three participants from any country and organization shall participate in the informal group.
2. A Chairman and a Secretary will govern the informal group.
3. The official language of the informal group will be English.
4. All documents and/or proposals must be submitted to the Secretary of the group in a suitable electronic format in advance of the meeting. The group may refuse to discuss any item or proposal, which has not been circulated 10 working days in advance.
5. An agenda and related documents will be circulated to all members of the informal group in advance of all scheduled meetings.
6. The process will pursue consensus. When consensus cannot be reached, the Chairman of the group shall present the different points of view to GRB.

Annex 4

INFORMAL WORKING GROUPS OF GRB

| <u>Informal group</u>                                    | <u>Chairman</u>   | <u>Secretary</u>   |
|--|---|--|
| Motor vehicle noise emissions<br>(Regulation No. 51)     | Mr. <b>Ch. Theis</b> (Germany)<br>Tel: (+49-228) 300-5343<br>Fax: (+49-228) 300-807-5343<br>E-mail: christian.theis@<br>bmvbw.bund.de         | Mr. <b>H.P. Bietenbeck</b><br>Tel.: (49) 221/90-32409<br>Fax : (49) 221/90-32760<br>E-mail: hbietenb@ford.com            |
| Motorcycle noise emissions<br>(Regulation No. 41)        | Mr. <b>A. Erario</b> (Italy)<br>Tel: (+39-06) 4158-6228<br>Fax: (+39-06) 4158-3253<br>E-mail: antonio.erario.a@<br>infrastrutturetrasporti.it | Mr. <b>N.M. Rogers</b><br>Tel: (+41-22) 920-2123<br>Fax: (+41-22) 920-2121<br>E-mail: nickrogers@<br>immamotorcycles.org |
| Additional sound emission provisions<br>(ASEP) <u>1/</u> | Mr. <b>B. Kortbeek</b> (Netherlands)<br>Tel: (+31-70) 339-4526<br>Fax: (+31-70) 339-1280<br>E-mail: boudewijn.kortbeek@<br>minvrom.nl         | To be determined   |
| Development of a gtr on noise <u>1/</u>                  | To be elected   | To be determined   |

1/ To be approved by WP.29 at its November 2005 session.

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