



## Economic and Social Council

Distr.  
GENERAL

TRANS/WP.29/GRB/34  
12 April 2002

Original: ENGLISH

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

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

Working Party on Noise (GRB)

### REPORT OF THE WORKING PARTY ON NOISE (GRB) ON ITS THIRTY-SIXTH SESSION

(26 to 28 February 2002)

#### ATTENDANCE

1. GRB held its thirty-sixth session from 26 February (afternoon only) to 28 February (morning only) 2002, under the Chairmanship of Mr. H. Löffelholz (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): Belgium; Czech Republic; France; Germany; Hungary; Italy; Japan; Netherlands; Norway; Poland; Russian Federation; Slovakia; Spain; Sweden; Switzerland; United Kingdom. A representative of the European Commission (EC) participated. 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 annex 1 to this report.

PROPOSED NEW DRAFT REGULATION CONCERNING THE TYRE ROLLING SOUND EMISSION

Documentation: TRANS/WP.29/2002/7; informal documents Nos. 1, 3, 5 and 7 of annex 1 to this report.

3. GRB agreed to review document TRANS/WP.29/2002/7, based on the text adopted by GRB at its thirty-fifth session, and agreed for transmission to WP.29 and AC.1 for consideration at their March 2002 sessions.

4. The expert from ETRTO agreed in general with the proposal, but asked for review of some modifications added to the document concerned. He presented informal document No. 1, reporting changes in scope, definitions, specifications and introductory provisions, as well as in annexes 1, 2 and 3. He noted that the approval marks shown in annex 2 were examples only and should allow other positions of the approval number in order to avoid high costs for modification of tyre moulds.

5. The expert from the United Kingdom presented informal document No. 5. He proposed GRB to amend the definition on "tyres designed for competition" and to align the dates in the introductory provisions to those in the European Union Directive 2001/43/EC.

6. The expert from the Russian Federation presented informal document No. 3, proposing to modify the test conditions with respect to the air temperature range specified in paragraph 2.2. of annex 3. However, GRB agreed to leave the text unchanged, in order to be in line with the specifications of the above-mentioned Directive.

7. After consideration of all informal documents, GRB finally agreed to amend the proposal as reproduced in annex 2 to this report and to transmit it to WP.29 and AC.1 for consideration at their June 2002 sessions.

8. The Chairman stated his intention to present the adopted amendments already as an informal document to WP.29 for consideration at its March 2002 session.

9. The expert from ISO informed GRB about the ISO work (informal document No. 7) on the specification of test tracks for the purpose of measuring noise emitted by road vehicles and their trailers (Acoustic standard: ISO 10844).

AMENDMENTS TO ECE REGULATIONS

- (a) Regulation No. 51 - development  
(Noise of M and N categories of vehicles)

Documentation: TRANS/WP.29/GRB/2001/2/Rev.1; TRANS/WP.29/GRB/2001/4; TRANS/WP.29/GRB/2001/5; TRANS/WP.29/GRB/2001/5/Add.1; TRANS/WP.29/GRB/2001/6; informal document No. 6 of thirty-fifth GRB session; informal documents Nos. 2, 6 and 8 of annex 1 to this report.

10. Recalling informal document No. 6 of the thirty-fifth GRB session, the expert from Japan introduced informal document No. 2 as a supplement to the study on pass-by noise testing methods incorporating urban driving conditions. The additional information included data on hybrid vehicles and vehicles with

automatic or continuously variable transmission. GRB agreed with his conclusion that the methods proposed by Germany and ISO showed the best correlation.

11. The expert from ISO introduced informal document No. 8 reporting on the recent activities of the working group WG42 on the development of a vehicle test more representative of urban driving. He said that the ISO working group had developed the first part of ISO 362 test method, based on the initial data developed by technical services and industry. He stated that the issues remaining would be resolved within the next year and a Draft International Standard would be provided early in 2003. He also said that the ISO working group was still working on the second part of ISO 362, taking into consideration vehicle test speed and acceleration rate.

12. The expert from the Czech Republic tabled informal document No. 6 in order to clarify the Czech reply to question 15 in the GRB questionnaire (document TRANS/WP.29/GRB/2001/5), regarding the distribution of temperature during noise test of motor vehicles in 2000 and 2001. GRB agreed to take the information into consideration on the occasion of the discussions on the replies to the above-mentioned questionnaire at the next GRB session.

13. The expert from the Netherlands gave a presentation on the limit values of the ACEA (European Automobile Manufacturers Association) test method for motor vehicle sound emission. He briefly reviewed the relation between noise emission and health, and underlined the importance of considering in the test method both sound emissions separately, i.e. the rolling and the power-train sound emissions. He proposed to introduce separate limit values for both sound emissions.

14. The expert from Sweden gave a presentation on the complexity of the development of new test methods taking into consideration the vehicle sound emission at low speed and at the same time high acceleration. He proposed guidelines for the new test procedure, in order to have a combination of the vehicle sound emissions at different speeds.

15. The expert from ISO stated that, as the development of a new test method regarding vehicle sound emission was still in work, he would take the Swedish proposal to the WG42 working group for discussion.

16. The expert from OICA gave a presentation on the noise test results of vehicle measurements according to the current ISO 362 standard. He pointed out that the new method is a good balance between rolling and power-train sound emission and proposed, in the case that GRB could agree on principles of the new test method, the following working timetable:

- (a) Validation of the new test method in summer 2002;
- (b) Discussion of the validation results in GRB during winter 2002;
- (c) Re-validation in summer 2003, if necessary.

17. In order to understand well the general traffic noise, the expert from the United Kingdom requested additional data on vehicle noise tests with different engines (diesel, gas, hybrid). Furthermore, he requested a reliable cost-benefit analysis of the proposed new test method.

18. The expert from OICA volunteered to submit a general overview of such a cost-benefit analysis.

19. In conclusion of the GRB discussion on development of Regulation No. 51 and in order to reduce unnecessary paper work, the Chairman proposed to

continue the GRB considerations in future on only one document, based on the test method proposal tabled by ISO (document TRANS/WP.29/GRB/2001/Rev.1).

20. The secretariat drew the attention of GRB to the footnote on page 5 of the ISO proposal, stating that the mentioned definitions of category L vehicles were not in line with those of the Consolidated Resolution on the Construction of Vehicles (R.E.3: document TRANS/WP.29/78/Rev.1/Amend.2).

21. The expert from Sweden suggested to wait for a decision on only one test method in order to have all experts involved in further discussion on the new test procedure.

22. The Chairman pointed out that the new proposal, based on the ISO proposal, would be a new GRB working document and should be completed by additional provisions.

23. In order to continue the GRB discussions at the next session, the delegation of Germany agreed to prepare a new working document on the basis of the ISO proposal, including new provisions of annex 2 of this ISO document.

(b) Regulation No. 59 (Replacement silencing systems)

Documentation: TRANS/WP.29/GRB/2001/7, TRANS/WP.29/GRB/2001/9;  
TRANS/WP.29/GRB/2002/1; informal document No. 4 of annex 1 to this report.

24. GRB agreed to continue consideration of document TRANS/WP.29/GRB/2002/1 tabled by CLEPA. The provisions of these minor amendments were deemed to align Regulation No. 59 with the corresponding European Union Directive as well as with the proposal made by the Russian Federation.

25. The expert from the Russian Federation introduced informal document No. 4, clarifying the requirements on replacement silencing systems to be fulfilled by a vehicle, which had been taken into service before the date of entry into force of subsequent amendments to Regulation No. 59.

26. GRB agreed that the limit values for the replacement silencing systems were always the values in force at the time when the vehicle was approved. In order to address the concerns of the Russian Federation, GRB agreed to include an additional sentence on the scope mentioned in paragraph 3.3.3. of document TRANS/WP.29/GRB/2002/1.

27. The secretariat pointed out that footnote No. 1 on page 2 of the document stated the contradictions of the new paragraph 3.4. with the WP.29 decision concerning the Conformity of Production provisions in Regulations.

28. After detailed discussion of the document, the Chairman concluded that GRB agreed in principle the following amendments to document TRANS/WP.29/GRB/2002/1:

Paragraph 3.3.3., add additional provisions to clarify the scope in the sense of the Russian Federation reported in paras. 25 and 26 above. The expert from CLEPA proposed to submit to the secretariat the additional sentence.

Paragraph 3.4., put into square brackets the whole paragraph

Paragraph 4.3.1.2., put into square brackets the wording [, where necessary]

Paragraph 6.2.1., 6.2.1.1. and 6.2.1.2., amend the words "submitted for" to read "granted to"

29. The remaining paragraphs marked by square brackets would be re-discussed in the next GRB session on the basis of a revised document.

30. Following the instructions of GRB, the secretariat was requested (with the assistance of CLEPA, providing the information mentioned at paragraph 28.) to prepare a final revision of document TRANS/WP.29/GRB/2002/1. The intentions were stated to adopt the revised document at the next GRB session, in September 2002.

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

31. No information was presented.

#### FUTURE CANDIDATE GLOBAL TECHNICAL REGULATIONS

32. The GRB Chairman reported that WP.29 and the Executive Committee of the 1998 Agreement (AC.3) continued to deliberate priorities for establishing future global technical regulations (gtr).

33. GRB agreed to await instructions from WP.29 concerning the work under the 1998 Agreement and, if necessary, adapt its own work accordingly.

#### OTHER BUSINESS

##### (a) Tribute to Mr. G. Meekel

34. With deep sorrow, GRB learned about the untimely passing away of Mr. Gerard Meekel (Chairman of GRE) on 4 February 2002. All the delegates honoured his memory, recalled his collaboration in the work with WP.29 and transmitted their condolences to his family and to the delegation of the Netherlands.

##### (b) Tributes to Mr. R.F. Schumacher, Mr. D. Hay and Mr. T. Ikari

35. The Chairman informed GRB that Mr. R.F. Schumacher (representing ISO) has taken the decision to retire at the end of February 2002. The Chairman acknowledged Mr. R.F. Schumacher's fruitful contributions during all the years of his activities in GRB, and presented best wishes for his retirement. He also welcomed Mr. J. Johnson (ISO) as successor of Mr. Schumacher.

36. Furthermore, the Chairman stated that Mr. D. Hay, expert from the United Kingdom, would leave his actual function, and that Mr. T. Ikari from Japan would return back to his country. He thanked both experts for the excellent work they have done in GRB, and wished them success in their new future responsibilities.

AGENDA FOR THE NEXT SESSION

37. The following agenda was agreed for the thirty-seventh session, scheduled to be held in Geneva on 19 (from 9.30 h) and 20 (until 17.30 h) September 2002 1/ 2/:

1. Proposed new draft Regulation concerning the tyre rolling sound emission
2. Amendments to ECE Regulations
  - 2.1. Regulation No. 51 - development (Noise of M and N categories of vehicles)
  - 2.2. Regulation No. 59 - (Replacement silencing systems)
3. Exchange of information on national and international requirements on noise levels 3/
4. Future candidate global technical regulations (GTR)
5. Other business

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1/ As part of the secretariat's efforts to reduce expenditure, all the official documents distributed prior to the session, by mail and/or placed on the web-site, will not be available in the conference room for distribution to session participants. Delegates are kindly requested to bring their copies of documents to the meeting. (The web-site address of the GRB documents: <http://www.unece.org/trans/main/wp29/wp29wgs/wp29grb.html>)

2/ New dates assigned by the UNOG Conference services (TRANS/WP.29/841, para. 19)

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

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Annex 1

## LIST OF INFORMAL DOCUMENTS DISTRIBUTED WITHOUT A SYMBOL DURING THE SESSION

No.	Transmitted by	Agenda item	Language	Title
1.	ETRTO	1.	E	Comments to the latest version of the Draft Regulation on "Uniform Provisions concerning the Approval of Tyres with regard to Rolling Sound Emissions" as per TRANS/WP.29/2002/7 issued on 18-12-2001
2.	Japan	2.1.	E	Additional data to the Informal Document No. 6 of 35th GRB
3.	Russian Federation	1.	E/R	Proposals for correction of the Draft Regulations with respect to tire noise
4.	Russian Federation	2.2.	E/R	Proposals for Amendments to the ECE Regulation No. 59 (Replacement silencing systems)
5.	United Kingdom	1.	E	Uniform provisions concerning the approval of tyres with regard to rolling sound emissions
6.	Czech Republic	2.1.	E	Clarification of the Czech reply of question 15 in GRB questionnaire
7.	ISO	1.	E	ISO 10844 - Acoustics - Specification of test tracks for the purpose of measuring noise emitted by road vehicles and their tyres (Revision of ISO 10844:1994)
8.	ISO	2.1.	E	ISO/TC43/SC1/WG42: Report of the activities of the working group on the development of a vehicle test more representative of urban driving
-	Sweden	-	E	Final Report of July 2001 on: Noise emissions of road vehicles; Effect of Regulations (for general information only)
-	Netherlands	2.1.	E	Presentation on the limit values of the ACEA test method
-	Sweden	2.1.	E	Presentation on the new test method for measuring the noise level

Annex 2

AMENDMENTS TO DOCUMENT TRANS/WP.29/2002/7  
ADOPTED BY GRB AT ITS THIRTY-SIXTH SESSION

Transmitted by the Chairman of GRB

Paragraph 1.1., amend to read:

" ... pneumatic tyres intended to be fitted to road vehicles ... "

Paragraph 1.1.4., amend to read:

"1.1.4. Tyres intended to be fitted to road vehicles categories ..... "

Paragraph 2.1., amend to read:

" ....

(iv) the category of use: normal tyre, special use tyre and snow tyre;

(v) ....."

Paragraph 2.7., amend to read:

" ... tyres intended to be fitted on vehicles involved in motor sport competition and not intended for non-competitive on-road use."

Paragraph 2.8., should be deleted:

Insert new paragraphs 2.8 to 2.10., to read:

"2.8. "Normal tyre" means a tyre intended for normal, everyday, on road use;

2.9. "Special use tyre" means a tyre intended for mixed use both on- and off-road or for other special duty.

2.10. "Snow tyre" means a tyre whose tread pattern, tread compound or structure are primarily designed to achieve in snow conditions a performance better than that of a normal tyre with regard to its ability to initiate or maintain vehicle motion."

Paragraph 6.1.1.2., amend to read:

" .... of use "Special" (see paragraph 4.2.6. above), the limits of .... "

Paragraph 12.1., amend to read:

" .....

(a) .....

(b) prohibit the sale or entry into service of a tyre  
if the tyre ..... "



Paragraph 12.2., amend to read:

"12.2. As from 4 August 2003, a Contracting Party applying this Regulation shall refuse to grant national approval of a type of tyre if the tyre falls within the scope of this Regulation and does not comply with the requirements of this Regulation."

Paragraph 12.3. and 12.4., should be deleted:

Paragraph 12.5. (former), renumber as paragraph 12.3. and amend to read:

"12.3. As from the dates given below, a Contracting Party applying this Regulation shall refuse to allow the sale or entry into service of a tyre which falls within the scope of this Regulation and which does not meet the requirements of this Regulation.

For Class 1 tyres up to 185 section width 1 October 2009

For Class 1 tyres over 185 up to 215 section width 1 October 2010

For Class 1 tyres over 215 section width 1 October 2011

For Class 2 and Class 3 tyres 1 October 2009

Prior to the above dates, Contracting Parties applying this Regulation shall not require for the sale or entry into service of a replacement tyre which falls within the scope of this Regulation, for it to comply with the requirements of this Regulation."

Paragraph 12.6. (former), renumber as paragraph 12.4.

Annex 1,

Item 6., amend to read:

"6. Sound level of the representative tyre size, see paragraph 2.5. of Regulation No. XXX, as per item 7. of the test report: ..... dB(A) at reference speed of 70/80 km/h 2/"

Item 14., amend to read:

"14. Annexed to this communication are:

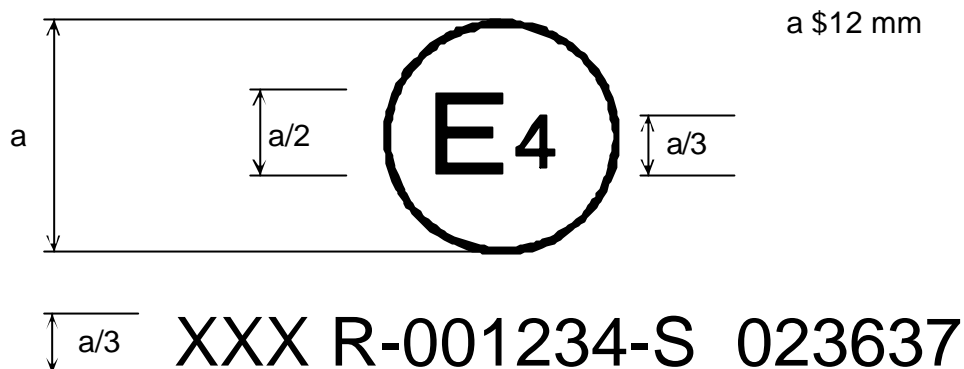
14.1. A list of documents in the approval file deposited at the Administration services having delivered the approval and which can be obtained upon request.

14.2. A list of tread-pattern designations: Specify for each trademark or brand name and trade description the list of tyre size designations adding, in the case of Class C1 tyres, the mark "Reinforced" or "Extra Load", if applicable."

Annex 2,

Example 2, amend to read:

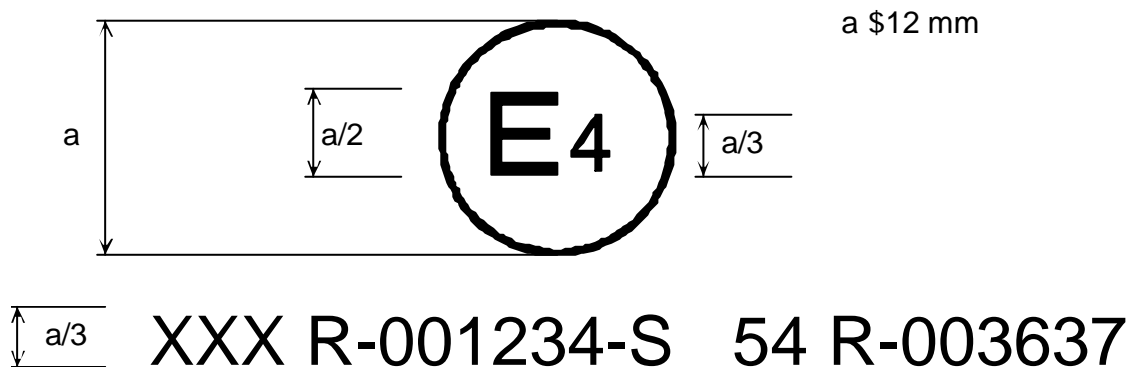
"Example 2



The above approval mark shows that the tyre concerned has been approved in the Netherlands (E4) pursuant to Regulations Nos. XXX and 30. The first two digits of the approval numbers indicate that, at the dates when the respective approvals were granted, Regulation No. XXX was still in its original form, but Regulation No. 30 included the 02 series of amendments."

Insert a new example 3, to read:

"Example 3



The above approval mark shows that the tyre concerned has been approved in the Netherlands (E4) pursuant to Regulations Nos. XXX and 54. The first two digits of the approval numbers indicate that, at the dates when the respective approvals were granted, Regulations Nos. XXX and 54 were still in their original form.

Note: The approval number(s) must be placed close to the circle and either above or below the "E" or on the left or right of that letter. The digits of the approval number must be on the same side of the "E" and face in the same direction. The use of Roman numerals as approval numbers should be avoided so as to prevent any confusion with other symbols."

Annex 3,

Paragraph 0., amend to read:

" ..... be related to tyre rolling sound measured during acceleration under power or deceleration under braking."

Paragraph 2.5.4., amend to read:

"2.5.4. Preparation prior the test

The tyres shall be "run-in" prior ..... "

Paragraph 4.2., amend to read:

" .....

.....

—

v is the mean value of logarithms of speed  $V_i$

..... "

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