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Working Party on Brakes and Running Gear (GRRF)

REPORT OF THE WORKING PARTY ON BRAKES AND RUNNING GEAR (GRRF)
ON ITS FIFTY-SECOND SESSION

(16 - 18 September 2002)

1. GRRF held its fifty-second session from 16 to 18 September 2002 under the Chairmanship of Mr. M. Fendick (United Kingdom). 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): Australia; Canada; Croatia; Czech Republic; Denmark; Finland; France; Germany; Hungary; Italy; Japan; Netherlands; People's Republic of China; Poland; Russian Federation; Spain; United Kingdom; United States of America; Yugoslavia. A representative of the European Commission (EC) also participated. Experts from the following non-governmental organizations 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); Federation of European Manufacturers of Friction Materials (FEMFM); Bureau International Permanent des Associations des Vendeurs et Rechapeurs des Pneumatiques (BIPAVER); Federation of European Motorcyclist Associations (FEMA). Upon the special invitation of the Chairman experts from the following non-governmental organizations participated: Comité de Liaison des Constructeurs de Carrosseries et Remorques (CLCCR).

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

REGULATIONS Nos. 13 and 13-H (Braking)

(a) Further development

Documentation: TRANS/WP.29/GRRF/2001/8; TRANS/WP.29/GRRF/2002/3; TRANS/WP.29/GRRF/2002/25; TRANS/WP.29/GRRF/2002/26; informal documents Nos. 10, 11 and 13 of annex 1 to this report.

3. As concerns the proposal reproduced in annex 2 to the report of the fifty-first session (TRANS/WP.29/GRRF/51), which superseded document TRANS/WP.29/GRRF/2001/8, the expert from the Russian Federation expressed his concerns for its application to buses. He distributed a document with an explanatory diagram explaining his concerns. In order to resume consideration of this issue, GRRF requested the secretariat to distribute the document with an official symbol for consideration at its next session.

4. GRRF continued consideration of the proposal of document TRANS/WP.29/GRRF/2002/3 as amended by informal document No. 13. GRRF adopted the proposal as reproduced in annex 2, and agreed to transmit it to WP.29 and AC.1 at their March 2003 sessions as draft Supplement 8 to the 09 Series of Amendments to Regulation No. 13. It was decided to keep the reference to the ISO standard in square brackets until its definite adoption, which would allow completing its reference to the year of its adoption. In order to avoid changing all the cross-references, it was agreed to reserve the deleted annex 16 for future amendments. At the request of the expert from France, GRRF agreed to check the WP.29 document at the February 2003 session.

5. GRRF also adopted the proposal of document TRANS/WP.29/GRRF/2002/25 as reproduced below. It was agreed to transmit it to WP.29 and AC.1 at their March 2003 sessions as draft Corrigendum 4 to Regulation No. 13-H.

Annex 3,

Paragraph 1.4.3.2., amend to read:

"1.4.3.2. The maximum practical performance figures shall be measured, and the behaviour of the vehicle shall be in accordance with paragraph 1.3.2. of this annex. However, if the maximum speed of the vehicle is greater than 200 km/h, the test speed shall be 160 km/h."

6. GRRF adopted the proposal, transmitted by the expert from CLEPA, for a draft Corrigendum (TRANS/WP.29/GRRF/2002/26) to Regulation No. 13 with the amendments indicated below. GRRF agreed to transmit it to WP.29 and AC.1 at their March 2003 sessions as draft Corrigendum 2 to Supplement 6 to the 09 Series of Amendments to Regulation No. 13.

Annex 12, appendix 2,

Items 9.8.1.2. and 9.8.1.3., amend to read:

"9.8.1.2 Where the overload protector is mechanical 1/
max. force which the inertia control device can develop
 $P'_{\max}/i_{Ho} = \mathbf{P_{op_max}} = \dots\dots\dots \text{N}$

9.8.1.3 Where the overload protector is hydraulic 1/
the pressure which the inertia control device can develop
 $p'_{\max}/i_h = \mathbf{P_{op_max}} = \dots\dots\dots \text{N/cm}^2$ "

Items 9.8.2.2. and 9.8.2.3., amend to read:

"9.8.2.2 Where the overload protector is mechanical 1/
max force which the inertia control device can develop
 $P'_{\max} = \mathbf{P_{op_max}} = \dots\dots\dots \text{N}$

9.8.2.3 Where the overload protector is hydraulic 1/
the pressure which the inertia control device can develop
 $p'_{\max} = \mathbf{P_{op_max}} = \dots\dots\dots \text{N/cm}^2$ "

Annex 12, appendix 4,

Item 5.6., amend to read:

"5.6. **Braking** torque of the brakes
 $n \cdot \mathbf{M^*} / (B \cdot R) = \dots\dots\dots$
(must be equal or greater than **1.0**)"

Items 5.6.1.1. to 5.6.1.4., amend to read:

"5.6.1.1. where the overload protector is mechanical on the inertia control device 1/
 $n \cdot \mathbf{P^*} / (i_{H1} \cdot \eta_{H1} \cdot P'_{\max}) = \dots\dots\dots$
(must be equal or greater than **1.2**)

5.6.1.2. where the overload protector is hydraulic on the inertia control device 1/
 $\mathbf{P^*} / P'_{\max} = \dots\dots\dots$
(must be equal or greater than **1.2**)

5.6.1.3. if the overload protector is on the inertia control device:
threshold force $\mathbf{D_{op}}/D^* = \dots\dots\dots$
(must be equal or greater than **1.2**)"

- 5.6.1.4 if the overload protector is fitted on the brake:
threshold torque $n \cdot M_{op}/(B \cdot R)$
(must be equal or greater than 1.2)"

7. GRRF also adopted the proposal transmitted by the expert from the United Kingdom (informal documents Nos. 10 and 10a) as reproduced below. It was agreed to transmit it to WP.29 and AC.1 for consideration at their March 2003 sessions, by including its text into the draft Supplement 8 to the 09 Series of Amendments to Regulation No. 13 (see para 4. above).

Paragraph 5.2.2.18., amend to read:

"5.2.2.18. Whenever power supplied by the ISO 7638: 1997 connector is used for the functions defined in paragraph 5.1.3.6. above, the braking system shall have priority and be protected from an overload external to the braking system. This protection shall be a function of the braking system."

8. Informal document No. 11 was also adopted, as reproduced below. GRRF agreed to incorporate it into the draft Supplement 8 to the 09 Series of Amendments to Regulation No. 13 (see para 4. above).

Annex 15, paragraph 4.6.3.1., amend the reference to "paragraph 1.7.4. of annex 4" to read "paragraph 1.7.2. of annex 4"

(b) Modular type approval for trailers

9. The expert from the European Commission informed GRRF that work continued in establishing the procedure for single vehicle approval for trailers. He said that, once the European Commission had transmitted the proposal to the European Parliament and to the Council, he would transmit a copy to GRRF as an informal document.

10. As concerns the alignment of the European Community Directive 98/12/EC to Regulation No. 13, GRRF expressed its concerns regarding the big difference between the prescriptions of both texts. This can result in the possibility of obtaining an approval in conformity to the Directive without incorporating the last prescriptions of the Regulation which are in force. In order to have a unique set of technical prescriptions, GRRF experts suggested that the Directive should be amended by eliminating all the technical annexes and making only a reference to the annexes of Regulation No. 13.

11. The expert from CLEPA raised the issue that the prescriptions for modular type approval for trailers (draft Supplement 7 to the 09 Series of Amendments to Regulation No. 13) would enter into force at the beginning of 2003 and that the industry would not be ready at that time. He offered to transmit transitional provisions to be considered at the February 2003 session. The Chairman expressed his doubts that such transitional provisions would enter into force before the main prescriptions and announced his intention to raise this issue at the November 2002 session of WP.29. As a possible solution, he would suggest that Contracting Parties should maintain the national rules for the modular type approval of trailers as an alternative to the new alternative procedure introduced in the Regulation.

(c) Facilitation of testing of vehicles in service

Documentation: TRANS/WP.29/GRRF/51, annex 3.

12. GRRF considered the proposed amendments to Regulation No. 13 reproduced in annex 3 to the report of the previous session (TRANS/WP.29/GRRF/51). After discussion, it was clarified that the provision of paragraph 5.1.4.1., stating that the braking system shall be so designed to allow the easy checking of the braking components influenced by wear was a general provision and that the further related paragraphs described how to comply with this general provision. GRRF clarified that, for friction components other than linings, the vehicle manufacturers would propose a text on how to assess the wear, although this need not necessarily be during the periodical technical inspection. Bearing this in mind, OICA agreed to transmit a proposal for consideration at the February 2003 session.

(d) Provisions for electric vehicles

Documentation: informal documents Nos. 5, 6 and 11 of the forty-eighth session.

13. At the request of the expert from the United States of America, GRRF withdrew this item from the agenda and agreed to include it into the draft global technical regulation for passenger vehicle brakes (see paragraph 17.).

(e) Illumination of stop lamps

Documentation: TRANS/WP.29/GRE/1999/17.

14. GRRF firmly stated that, concerning the illumination of stop lamps, it belonged to GRE to define the lamp characteristics and to GRRF to set up the provisions regarding the stop lamp illumination with respect to the interface with the braking system. Under this general principle, the Chairman proposed that in the case of the activation of the service brake or automatic commanded braking, the stop lamps shall be illuminated. He also proposed that the activation of the selective brake shall not illuminate them and that the activation of the retarder should be considered separately. Nevertheless, he reminded GRRF that the current Regulation No. 48 made the activation optional with the use of the retarder. The majority of experts supported this proposal and the expert from the United Kingdom agreed to prepare a formal proposal on this basis for consideration at the next session.

(f) Braking compatibility of heavy goods vehicles

Documentation: Informal documents Nos. 2 and 8 of annex 1 to this report.

15. The expert from the United Kingdom reported to GRRF on the third meeting on braking compatibility of heavy goods vehicles (informal document No. 8). He also mentioned that informal document No. 2 from Turkey suggested that the compatibility corridors should be narrower. A fourth meeting of the informal group was scheduled for 30 October 2002. The expert from CLCCR confirmed that their experts were working jointly with OICA experts and said that a proposal could hopefully be transmitted for the next GRRF session.

16. At the request of the expert from CLEPA, the Chairman asked that at the next session of GRRF all the Contracting Parties should advise if their national legislation recommended or imposed the mandatory use of the ISO 7638 connector, and if an independent service braking system for the trailers was still permitted.

(g) Global technical regulation (gtr) for passenger vehicle brakes

17. The Chairman reminded GRRF that, in developing the gtr, a sponsor country and a Chairman for the informal group was required. The expert from Japan announced the submission of a document for the next session and would, probably, present a candidate for the Chairmanship of the informal group.

REGULATION No. 78 (Motorcycle braking)

Global technical regulation (gtr) on motorcycle braking requirements

18. The Chairman informed GRRF that Canada had offered to sponsor the gtr and that it was the responsibility of GRRF to define how to work on this matter. The expert from Canada confirmed that work to develop a draft gtr was in progress in his country incorporating the latest motorcycle technologies and taking into account the testing programme conducted in the United States of America.

19. The expert from IMMA offered his collaboration to Canada and the United States of America for the development of the gtr and recalled all the presentations he had made at the previous sessions. In general, in developing a gtr, a considerable number of tests were needed, which implied important financial resources. He said that industry would probably be in a position to carry out such tests as part of their in-house testing. As it was unlikely that Governments would be able to devote large budgets to all the gtr subjects, IMMA believed that progress was only possible with a free and transparent flux of information and collaboration between Governments and industry. For the gtr on motorcycle braking, he expressed his opinion that the scope of the gtr should cover motorcycles, in a later step mopeds, and that the three or four-wheeled motorcycles should only be covered on a regional or national basis.

20. The expert from Canada requested the experts from Governments to provide data of accidents and analysis allowing him to prepare the justification for the gtr. The expert from the United States of America stated that GRRF needed to decide if the gtr should include all the current regulations for their harmonization or to upgrade them, but that this decision could be taken at a later stage. The expert from the United Kingdom referred to the discussions on developing a gtr for tyres and considered that the involvement of industry was essential to achieve a balanced result, particularly as industry had already carried out a considerable amount of work on this issue. He expressed concern about the stated approach to developing the gtr and the apparent wish to mandate the use of antilock or combined braking systems. Whilst this may be desirable, he felt that current systems would be around for some years and should not be ignored by the gtr.

21. The expert from FEMA expressed his hope that any informal group in charge of developing the gtr would be opened to all experts and suggested that the gtr should not mandate antilock braking system (ABS) and combined braking system (CBS), because only 10 per cent of the existing motorcycles were equipped with such systems.

22. The expert from Canada confirmed that there would be a meeting of the interested parties on 25 October 2002 and that all the interested experts were welcome to participate. Canada thought that the gtr should include provisions for ABS and CBS because they represented the most developing technology for motorcycles.

23. The expert from Germany clarified that his position expressed at the previous GRRF session (TRANS/WP.29/GRRF/51, para. 21) was not to prepare a document incorporating ABS prescriptions in Regulation No. 78 but to stress the need to incorporate such prescriptions into the gtr.

REGULATION No. 90 (Replacement brake linings)

(a) Further development

Documentation: TRANS/WP.29/GRRF/2001/18.

24. The expert from FEMFM informed GRRF that work was in progress to update the proposal, hoping that it would be ready for the next GRRF session.

(b) Proposal for a new draft global technical regulation on replacement brake linings

25. The Chairman informed GRRF that the development of a gtr on replacement brake linings had not been considered as a priority by WP.29. GRRF agreed to put aside this item from the agenda until WP.29 considered it as a priority.

REGULATION No. 111 (Handling and stability of vehicles)

Documentation: TRANS/WP.29/GRRF/2000/19; TRANS/WP.29/GRRF/2002/27; informal document No. 17 of annex 1 to this report.

26. The expert from the Russian Federation presented informal document No. 17 containing an explanation to document TRANS/WP.29/GRRF/2002/27. He summarized his proposals saying that the tilt test allowed the evaluation of dynamic stability for N2 and N3 vehicles but did not take into account the body roll angle. A roll angle not exceeding 8° was the value accepted by his country, and there was a close correlation between roll angles obtained in the tilt test and the speed in the line-change-mode. The type of suspension did not substantially influence the test results. He also stated that the tilt test requirements were suitable for on-road use but that the Russian Federation would require different limits for off-road vehicles.

27. The application of a correction factor between tests using water and the actual intended load was accepted in principle but GRRF thought that document TRANS/WP.29/GRRF/2002/27 contained incorrect and undefined symbols. Experts were requested to send their comments to the expert from the Russian Federation in order to allow him to clarify the proposal where necessary.

28. The Chairman said that a decision regarding the incorporation of roll angle requirements should be taken at the next session. He recommended experts to consider if the development of the Regulation would be necessary, due to new electronic systems being developed by vehicle manufacturers for assuring vehicle stability. He requested industry to inform GRRF at its February 2003 session about these new technologies.

29. The Chairman concluded that, depending on the above, GRRF might continue consideration of a revised proposal from the Russian Federation.

REGULATION No. 79 (Steering equipment)

Documentation: TRANS/WP.29/GRRF/2002/5 and Add.1; TRANS/WP.29/GRRF/2002/23; TRANS/WP.29/GRRF/2002/24; informal documents Nos. 12 and 18 of annex 1 to this report.

30. The expert from Germany made a presentation of the new developments on steering systems one being a fully autonomous electric system (without driver), and another using an active mechanical system, that included electric power assistance, in which the driver always had the control of the steering. He confirmed that Regulation No. 79 currently did not cover a purely electric system.

31. The expert from the United Kingdom introduced TRANS/WP.29/GRRF/2002/23 and informal document No. 12 both containing amendments to document TRANS/WP.29/GRRF/2002/5. He requested GRRF to give consideration for including an introductory note for the Regulation that outlined the philosophy of the amendments. His major concern was the introduction of systems without any direct mechanical connection between the steering wheel and the road wheels and the "automatically commanded steering" concept. These new developments would benefit from an explanation that would be of value to a layperson in understanding the Regulation. There was obvious concern amongst delegates on some of the proposals, particularly related to the maximum vehicle speeds for automatically commanded systems and, after consideration, GRRF agreed that a drafting group would examine the proposals and provide GRRF with a further, consolidated, proposal. The expert from Poland introduced TRANS/WP.29/GRRF/2002/24 and informal document No. 18, also containing amendments to the proposal of TRANS/WP.29/GRRF/2002/5. The United Kingdom expert thought that the proposals really only concerned a change to the method of test from a manually controlled steering application to an automated application and considered that the steering time involved in the new proposal was too long. The expert from Germany agreed that, in his experience, the present method and steering time requirement was acceptable. Delegates expressed concern that the proposed reduced steering efforts for N2 category vehicles would result in them all having to be fitted with power assistance. Nevertheless, GRRF requested the secretariat to distribute informal document No. 18 with an official symbol for consideration at the February 2003 session.

TYRES

(a) Global harmonization of tyre regulations

Documentation: Informal documents Nos. 15, 16, 19 and 20 of annex 1 to this report.

32. The expert from the United Kingdom, speaking for the Chairman of the informal group, confirmed that work on the global technical regulation (gtr) had been suspended and said that the

informal group had developed a proposal for a gtr without having it with an official symbol for GRRF. He offered to send the proposal to the secretariat and GRRF requested the secretariat to distribute this draft gtr with an official symbol for the next session in order to record the work and progress of the informal group, and as a possible basis document for amending the Regulations related to tyres in the future. GRRF also requested the secretariat to distribute as informal documents for the fifty-second session, the comments that the informal group had sent to the United States of America on the proposals for tyre labelling (marking) and on upgrading performance requirements.

Note by the secretariat: This two new informal documents are available in the GRRF website as informal documents Nos. 19 and 20.

33. The expert from the United States of America informed GRRF on the situation of the rulemaking process on the new tyre standard upgrade, amending FMVSS 139 (informal document No. 15) and on the final rule on tyre pressure monitoring systems (informal document No. 16)

34. At the request of the expert from Germany to introduce some of the new requirements of FMVSS 139 into the ECE Regulations, the expert from ETRTO stated that amendments to Regulation No.30 could be considered but that accidents due to tyre design or manufacturing defects were minimal and the major problem was one of user abuse.

(b) Tyre adhesion test

35. The expert from the United Kingdom reminded GRRF that the informal group had not met since November 2001, but that the ISO working group continued its work. He said that a revised draft ISO standard would be presented to the ISO group in early October 2002 and that the two options, testing a car or a trailer, were still proposed. The expert from the European Commission informed GRRF that the European Union position on the tyre adhesion test would be taken by middle 2003. The expert from Japan considered that only one test method should be presented in the UNECE Regulation.

(c) Regulation No. 30 (Pneumatic tyres)

Documentation: TRANS/WP.29/GRRF/2002/11; TRANS/WP.29/GRRF/2002/15; informal document No. 3 of annex 1 to this report.

36. The expert from the United Kingdom expressed his refusal to accept a temporary marking of the tyres as indicated in the proposal by ETRTO (TRANS/WP.29/GRRF/2002/11). No agreement was reached, and GRRF agreed to continue consideration of the proposal at its next session.

37. The expert from the United Kingdom introduced the proposal of document TRANS/WP.29/GRRF/2002/15 based on informal document No. 16 of the previous session. (TRANS/WP.29/GRRF/51, para. 54). He also introduced informal document No. 3 amending his proposal. Following his suggestion, GRRF agreed to consider both proposals at the next session and requested the secretariat to distribute with an official symbol a consolidated text of both documents.

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

Documentation: TRANS/WP.29/GRRF/2002/12; TRANS/WP.29/GRRF/2002/16; informal document No. 4 of annex 1 to this report.

38. GRRF adopted the proposal of TRANS/WP.29/GRRF/2001/12. GRRF also considered and adopted the proposal of TRANS/WP.29/GRRF/2001/16, modified by informal document No. 4. It was agreed to transmit the proposals, as reproduced in annex 3 to this report, to WP.29 and AC.1 for consideration at their June 2003 sessions as draft Supplement 15 to the Regulation.

Note by the secretariat: When drafting the report, the secretariat was advised by the expert from the United Kingdom that the adopted proposals of documents TRANS/WP.29/GRRF/2002/12; TRANS/WP.29/GRRF/2002/16 and informal document No. 4 were slightly incompatible. The proposal reproduced in annex 3 to this report eliminates the incompatibility. Nevertheless, GRRF may wish to re-consider the consolidated proposal at its February 2003 session, just before its consideration by WP.29 and AC.1 at their March 2003 sessions.

(e) Regulation No. 64 (Temporary use spare wheel/tyres)

Documentation: TRANS/WP.29/GRRF/2002/13; TRANS/WP.29/GRRF/2002/17; informal document No. 7 of annex 1 to this report.

39. The expert from OICA introduced the proposal to increase the maximum permissible time to inflate the tyre for off-road vehicles (TRANS/WP.29/GRRF/2002/13). With the opposition of the experts from Denmark and the United Kingdom, GRRF adopted the proposal and agreed to transmit it to WP.29/AC.1 for consideration at their March 2003 sessions as draft Supplement 2 to Regulation No. 64.

40. At the suggestion of the expert from the United Kingdom, GRRF agreed to consider a revision of the proposal of document TRANS/WP.29/GRRF/2002/17, as amended by informal document No. 7. GRRF requested the secretariat to distribute it with an official symbol for consideration at its next session. The expert from the Netherlands asked for further details on run flat system tyres and it is apparent that a proposal is needed to add requirements for such tyres, including identification marking, to Regulation No. 30 and possibly Regulation No. 54.

(f) Regulation No. 106 (Agricultural tyres)

Documentation: TRANS/WP.29/GRRF/2001/14.

41. The expert from ETRTO withdrew his proposal for amending the Regulation (TRANS/WP.29/GRRF/2001/14).

(g) Regulation No. 108 (Retreaded pneumatic tyres)

Documentation: TRANS/WP.29/GRRF/2002/10; TRANS/WP.29/GRRF/2002/18; informal document No. 5 of annex 1 to this report.

42. Following the suggestion of the expert from the United Kingdom, GRRF agreed to consider a revision of the proposal of document TRANS/WP.29/GRRF/2002/18, as amended by informal document No. 5. The secretariat was requested to distribute the document with an official symbol for consideration at the February 2003 session.

43. GRRF adopted the proposal of annex 4 of the report of the fifty-first session (TRANS/WP.29/GRRF/51, annex 4). It was agreed to transmit the proposal to WP.29 and AC.1 for consideration at their March 2003 session as draft Supplement 1 to Regulation No. 108.

44. GRRF also adopted the proposal of document TRANS/WP.29/GRRF/2002/10. It was agreed to transmit the proposal to WP.29 and AC.1 for consideration at their March 2003 sessions as draft Corrigendum 1 to Regulation No. 108.

(h) Regulation No. 109 (Retreaded pneumatic tyres for commercial vehicles)

Documentation: TRANS/WP.29/GRRF/2002/19; TRANS/WP.29/GRRF/2002/20; TRANS/WP.29/GRRF/2002/21; informal documents Nos. 6, 9 and 14 of annex 1 to this report.

45. As per Regulation No. 108 (see para. 42 above), GRRF agreed to consider a revision of the proposal of document TRANS/WP.29/GRRF/2002/19, as amended by informal document No. 6. The secretariat was requested to distribute the document with an official symbol for consideration at the next session.

46. GRRF considered and adopted, as reproduced below, the proposal of document TRANS/WP.29/GRRF/2002/20. It was agreed to transmit the proposal to WP.29 and AC.1 for consideration at their March 2003 sessions as draft Corrigendum 1 to Supplement 1 to Regulation No. 109.

Paragraph 3.2.12., footnote 7/, amend the word "approved", to read "manufactured."

47. Concerning the retreading of non "e" or "E" marked tyres (TRANS/WP.29/GRRF/2002/21), the expert from BIPAVER introduced informal document No. 14, which contained the reasoning for including the acceptance of tyres conforming to Japanese Standards for retreading in accordance with the Regulation. The experts from France, Italy, Germany and Spain shared the opinion expressed by the expert from the Netherlands that under the legal framework of the 1958 Agreement, Contracting Parties should not accept other standards different from the Regulations annexed to the 1958 Agreement. The expert from France also indicated that Regulation No. 109 was a product certification for a tyre type-approved under Regulation No. 54, and that for this reason it was not possible to accept other tyres. The expert from the United Kingdom was uncertain about the legal point of view of the above-mentioned experts, but indicated that technically he could accept the proposal because, as the expert from BIPAVER mentioned, the technical prescriptions of both standards were similar and that Regulation No.109 was, in effect, a re-approval process.

48. The Chairman announced his intention to report on this issue to WP.29, in order to obtain a general guidance.

49. The expert from BIPAVER presented informal document No. 9, in which he explained that information for the retreading industry regarding the upgrading, in some instances, of the service description of tyre carcasses, was available neither from the new tyre manufacturer, nor from the type-approval Authorities. He said that, due to the lack of this information, the independent retreading industry was disadvantaged in comparison with the new tyre industry that carried out its own retreading. After consideration of the issue, the expert from the United Kingdom volunteered to prepare a proposal to amend Regulation No. 54 in order to make it clear when and what information regarding upgrading should be made available for the retreading industry. The GRRF Chairman announced his intention to report WP.29 on this issue.

PROPOSAL FOR A DRAFT REGULATION ON WHEELS

Documentation: TRANS/WP.29/GRRF/2002/22.

50. The expert from Italy presented document TRANS/WP.29/GRRF/2002/22, which included the proposal of informal document No. 22 of the fifty-first session. He said that the proposal was agreed in a meeting in which the experts from Germany, the United Kingdom and Italy had participated.

51. GRRF adopted the document with the amendments reproduced below but agreed not to transmit it to WP.29 and AC.1 for consideration until there was a clear signal by the European Union Member States that they would support this new Regulation. The Chairman announced his intention to report to WP.29 that GRRF had completed the technical work for the draft Regulation.

Paragraph 2.4.1., amend to read:

"2.4.1. "Vehicle manufacturer's replacement wheels" being wheels supplied by the vehicle manufacturer."

Paragraph 2.4.2., amend to read:

" same manufacturing equipment and material as that used for replacement wheels
..... "

Paragraph 2.4.3., amend to read:

" but produced by a manufacturer who is not a supplier of the vehicle manufacturer with the specified wheel. With regard to the design "

Paragraph 2.4.4., amend to read:

" wheels produced by a manufacturer who is not a supplier of the vehicle manufacturer with the specified wheel. With regard to the design, "

Paragraph 3.1.2.1., amend to read:

" ... wheels - see paragraphs 2.4.2., 2.4.3. and 2.4.4."

Insert a new paragraph 3.1.2.12., to read:

"3.1.2.12. tyre size designations specified for original equipment by the vehicle manufacturer."

Insert a new paragraph 3.1.3., to read:

"3.3. Documentation in accordance with paragraph 1. of annex 10 to this Regulation:

- vehicle characteristics (annex 10, item 1.2.);
- additional characteristics (annex 10, item 1.3.);
- fitting instructions details (annex 10, item 1.4.); and
- additional requirements (annex 10, item 2.)."

Paragraph 3.1.3. (former), renumber as paragraph 3.1.4.

Insert the missing paragraph 6.4., to read:

"6.4. In the case of identical replacement wheel as defined in paragraph 2.4.2., there shall not be any requirement for physical testing as given in paragraph 6.5. or vehicle fitment checking as given in paragraph 2. of annex 10 to this Regulation."

Paragraphs 6.5.2.1. and 6.5.3.1., delete subparagraph (e)

Paragraph 6.6., should be deleted.

Paragraph 6.7. (former), renumber as paragraph 6.6., and amend to read:

" Type Approval Authority or designated Technical Service (see annex 6 paragraph 4. of this Regulation)."

Paragraphs 6.8. and 6.8.1. (former), renumber as paragraphs 6.7. and 6.7.1.

Paragraph 6.8.2. (former), renumber as paragraph 6.7.2., and amend to read:

"6.7.2. Wheels shall be suitable for tyres of the tyre size designations specified initially by "

Annex 10, paragraph 1.2., amend to read:

" vehicle power and VIN range including "

ELECTION OF OFFICERS

52. Mr. Fendick who has chaired GRRF for the last 10 years announced his intention to not continue chairing GRRF due to his growing responsibilities in his country. As no candidate was presented for election, GRRF decided to elect the new Chairman at the beginning of the fifty-third session.

TRIBUTE TO MR. M. FENDICK

53. GRRF thanked Mr. Fendick for his excellent Chairmanship of GRRF during the last ten years. All the experts wished him the very best in his function and in particular in WP.29, where he will continue to represent the United Kingdom. The Secretary expressed his personal thanks to Mr. Fendick for his huge collaboration, which had facilitated his work. GRRF experts expressed their gratitude to Mr. Fendick with a great and long ovation.

AGENDA FOR THE NEXT SESSION

54. The following agenda was agreed for the fifty-third session of GRRF to be held in Geneva, from 3 (14.30h) to 7 (17.30h) February 2003 1/ 2/:

1. Regulation Nos. 13 and 13-H (Braking)
 - 1.1. Further development
 - 1.2. Modular type approvals for trailers
 - 1.3. Facilitation of testing of vehicles in-service
 - 1.4. Illumination of stop lamps
 - 1.5. Braking Compatibility of heavy goods vehicles
 - 1.6. Global technical regulation for passenger vehicle brakes
2. Harmonization of motorcycle braking requirements
3. Regulation No. 90 (Replacement brake linings)
Further development
4. Regulation No. 111 (Handling and stability of vehicles)
Further development
5. Regulation No. 79 (Steering equipment)
Further development

6. Tyres
 - 6.1. Global harmonization of tyre regulations
 - 6.2. Tyre adhesion test
 - 6.3. Regulation No. 30 (Pneumatic tyres)
 - 6.4. Regulation No. 54 (Pneumatic tyres for commercial vehicles)
 - 6.5. Regulation No. 64 (Temporary use spare wheels/tyres)
 - 6.6. Regulation No. 108 (Retreaded pneumatic tyres)
 - 6.7. Regulation No. 109 (Retreaded pneumatic tyres for commercial vehicles)
 7. ELECTION OF OFFICERS
 8. OTHER BUSINESS
-

1/ As part of the secretariat's efforts to reduce expenditure, all the official documents distributed prior to the session by mail or placed on the UNECE website (<http://www.unece.org/trans/main/welcwp29.htm>) 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/ An extra half-day was assigned by WP.29 (see TRANS/WP.29/861, para. 22 and annex 2).

Annex 1

LIST OF INFORMAL DOCUMENTS DISTRIBUTED WITHOUT A SYMBOL
DURING THE SESSION

No.	Transmitted By	Agenda item	Language	Title
1.	Chairman	-	E	Proposed Meeting Running Order
2.	Turkey	1.6.	E	Application of Disc Brakes and EBS Systems on HGV Combinations
3.	United Kingdom	6.3.	E	Amendment to UK submission for amendments to Regulation No. 30 Car Tyres - Document TRANS/WP.29/GRRF/2002/15
4.	United Kingdom	6.4.	E	Amendment to UK submission for amendments to Regulation No. 54 Commercial Vehicle Tyres - Document TRANS/WP.29/GRRF/2002/16
5.	United Kingdom	6.7.	E	Amendment to UK submission for amendments to Regulation No. 108 Retreaded Car Tyres - Document TRANS/WP.29/GRRF/2002/18
6.	United Kingdom	6.8.	E	Amendment to UK submission for amendments to Regulation No. 109 Retread Commercial Vehicle Tyres - Document TRANS/WP.29/GRRF/2002/19
7.	United Kingdom	6.5.	E	Submission by the United Kingdom for amendments to Regulation No. 64, Temporary use spare wheels/tyres - Document No. TRANS/WP.29/GRRF/2002/17
8.	United Kingdom	1.6.	E	Third HGV Compatibility Ad-hoc Working Group Meeting Report to GRRF
9.	BIPAVER	6.8.	E	ECE Regulation 109 - Upgrading Information
10.	United Kingdom	1.1.	E	Proposal to amend UNECE Regulation 13
10a.	CLEPA	1.1.	E	Alternative to the wording proposed in Informal Document No. 10

No.	Transmitted by	Agenda Item	Language	Title
11.	Germany	1.1.	E	Proposal for Draft Corrigendum 3 to the 09 series of amendments to Regulation No. 13
12.	United Kingdom	5.	E	Proposal from the United Kingdom regarding further amendments to the draft Regulation No. 79, Document TRANS/WP.29/GRRF/2002/5
13.	ISO	1.1.	E	Proposal for Draft Amendments to Regulation No. 13
14.	BIPAVER	6.8.	E	Proposal for the Inclusion of JIS Marked Tyres into Regulation No. 109
15.	United States of America	6.1.	E	Tire standard upgrade - FMVSS 139
16.	United States of America	6.1.	E	Tire Pressure Monitoring Systems Final Rule
17.	Russian Federation	4.	E	Comments to the Russian Federation proposal concerning Regulation No. 111
18.	Poland	5.	E	Proposal to complete document TRANS/WP.29/GRRF/2002/24
19.	United Kingdom	6.1.	E	Docket No. NHTSA-01-11157 – Tyre Safety Information Comment from the UNECE Group for Global Technical Regulations for Vehicle Tyres
20.	United Kingdom	6.1.	E	Docket No. NHTSA-00-8011 – Updating of Safety Performance Requirements for Tyres Comment from the UNECE Group for Global Technical Regulations for Vehicle Tyres

Annex 2

AMENDMENTS TO REGULATION No. 13 BASED ON DOCUMENT
TRANS/WP.29/GRRF/2002/3 ADOPTED BY GRRF AT ITS FIFTY-SECOND SESSION

Throughout the Regulation and its annexes, replace the reference to "ISO 11992-1:1998" by the reference to "[ISO 11992-1:2003]"

Throughout the Regulation and its annexes, replace the reference to "ISO 11992-2:1998" by the reference to "[ISO 11992-2:2003]"

Text of the Regulation,

Paragraph 5.1.3.6., amend to read:

"5.1.3.6. The electric control line shall conform to [ISO 11992-1 and 11992-2:2003] and be a point-to-point type using the seven pin connector according to ISO 7638-1 or 7638-2:1997. The data contacts of the ISO 7368 connector shall be used to transfer information exclusively for braking (including ABS) and running gear (steering, tyres and suspension) functions as specified in [ISO 11992-2:2003]. The braking functions have priority and shall be maintained in the normal and failed modes. The transmission of running gear information shall not delay braking functions. The power supply, provided by the ISO 7638 connector, shall be used exclusively for braking and running gear functions and that required for the transfer of trailer related information not transmitted via the electric control line. However, in all cases the provisions of paragraph 5.2.2.18. of this Regulation shall apply. The power supply for all other functions shall use other measures."

Paragraph 5.1.3.6.1., amend to read:

" type approval by checking that the relevant provisions of [ISO 11992:2003] parts 1 and 2 are fulfilled. Annex 17 of this Regulation "

Annex 6,

Paragraph 3.4.1., amend to read:

"3.4.1. The simulator shall produce a digital demand signal in the electric control line according to [ISO 11992-2:2003] and shall provide (see paragraphs 6.4.2.2.24. and 6.4.2.2.25. of [ISO 11992-2:2003])."

Annex 16, amend to read:

"Annex 16

(Reserved)"

Annex 17,

Paragraph 3.1.2., amend to read:

"3.1.2. be capable of receiving all of the messages transmitted by the motor vehicle to be type approved and be capable of transmitting all trailer messages defined within [ISO 11992-2:2003];"

Paragraph 3.2.2.1.1., renumber as paragraph 3.2.2.2.1., and amend the heading of the third column of the table to read " Electrical Control Line Signal Value"

Paragraphs 3.2.2.3.1. and 3.2.2.3.2., amend the reference to "paragraph 5.2.1.29.2." to read "paragraph 5.2.1.29.1.2."

Insert a new paragraph 3.2.2.4., to read:

"3.2.2.4. Supply line braking request:

For power-driven vehicles which can be operated with trailers connected via an electric control line only:

Only the electric control line shall be connected.

Simulate message EBS 22, byte 4 with bits 3 - 4 set to 01b and check that when the service brake, secondary brake or parking brake is fully actuated the pressure in the supply line falls to 1.5 bar within the following two seconds.

Simulate a continuous absence of data communication and check that when the service brake, secondary brake or parking brake is fully actuated the pressure in the supply line falls to 1.5 bar within the following two seconds."

Paragraphs 3.2.2.4. and 3.2.2.4.1. (former), renumber as paragraphs 3.2.2.5. and 3.2.2.5.1.

Paragraph 4.1.3., amend to read:

"... vehicle messages defined within [ISO 11992-2:2003]."

Paragraph 4.2.2.1.1.1., amend the table to read:

"

Message Transmitted by the Simulator		Pressure at the Brake Chambers
Byte Reference	Digital Demand Value	
3 - 4	0	0 bar
3 - 4	33280d (6.5 bar)	As defined in the vehicle manufacturer's brake calculation

"

Paragraph 4.2.2.1.1.2., amend the table to read:

"

Message Transmitted by the Simulator		Pressure at the Brake Chambers
Byte Reference	Digital Demand Value	
3 - 4	0	0 bar
3 - 4	33280d (6.5 bar)	As defined in the vehicle manufacturer's brake calculation

"

Insert a new paragraph 4.2.2.1.3., to read:

"4.2.2.1.3. For trailers connected with only an electrical control line, the response of the trailer to a failure in the electric control transmission of the trailer which results in a reduction in braking performance to at least 30 per cent of the prescribed value shall be checked by the following procedure:

The pneumatic supply line at the start of each test shall be ≥ 7.0 bar.

The electric control line shall be connected to the simulator.

Byte 3, bits 5-6 of EBS 12 set to 00b to indicate to the trailer that a pneumatic control line is not available.

Byte 3, bits 1-2 of EBS 12 set to 01b to indicate to the trailer that the electric control line signal is generated from two independent circuits.

The following shall be checked:

Test Condition	Braking System Response
With no faults present in the trailer braking system	Check that the braking system is communicating with the simulator and that Byte 4, bits 3-4 of EBS 22 is set to 00b.
Introduce a failure in the electric control transmission of the trailer braking system that prevents at least 30 percent of the prescribed braking performance from being maintained	Check that Byte 4, bits 3-4 of EBS 22 is set to 01b Or The data communications to the simulator has been terminated

Paragraph 4.2.2.2.1.1., amend to read:

"4.2.2.2.1.1. Where a permanent failure within the electric control transmission of the trailer braking system precludes the service braking performance being met, simulate such a failure and check that byte 2, bits 3 - 4 of EBS 22 transmitted by the trailer is set to 01b. A signal should also be transmitted via pin 5 of the ISO 7638 connector (yellow warning)."

Note by the secretariat: This proposal completed with the amendments reproduced in paragraphs 7. and 8. of this report should conform the draft Supplement 8 to the 09 Series of Amendments to Regulation No. 13.

Annex 3

AMENDMENTS TO REGULATION No. 54 ADOPTED BY GRRF
AT ITS FIFTY-SECOND SESSION

Paragraph 2.17.1.2., amend to read:

" in annex 5 to this Regulation or, depending on the tyre design type, the nominal outer diameter expressed in mm;"

Insert a new paragraph 2.17.1.4. to read:

"2.17.1.4. An indication of the tyre to rim fitment configuration when it differs from the standard configuration and is not already expressed by the symbol "d" denoting the nominal rim diameter code."

Paragraphs 2.17.2. to 2.17.2.5., should be deleted.

Paragraph 3.1.11., amend to read:

"3.1.11. In the case of tyres first approved after [1 January 2004] the identification referred to in paragraph 2.17.1.4. shall be placed only immediately after the rim diameter marking referred to in paragraph 2.17.1.3."

Insert new paragraphs 3.1.13 to 3.1.15., to read:

"3.1.13. The suffix "C" or "LT" after the rim diameter marking referred to in paragraph 2.17.1.3., and, if applicable, after the tyre to rim fitment configuration referred to in paragraph 2.17.1.4:

3.1.13.1. this marking is optional in the case of tyres fitted on 5° drop centre rims, suitable for single and dual fitment, having a load capacity index in single lower or equal to 121 and destined for the equipment of motor vehicles.

3.1.13.2. this marking is mandatory in the case of tyres fitted on 5° drop centre rims, suitable for single fitment only, having a load capacity index higher or equal to 122 and destined for the equipment of motor vehicles.

3.1.14. The suffix "CP" after the rim diameter marking referred to in paragraph 2.17.1.3., and, if applicable, after the tyre to rim fitment configuration referred to in paragraph 2.17.1.4. This marking is mandatory in the case of tyres fitted on 5° drop centre rims, having a load capacity index in single lower or equal to 121 and specifically designed for the equipment of motor caravans.

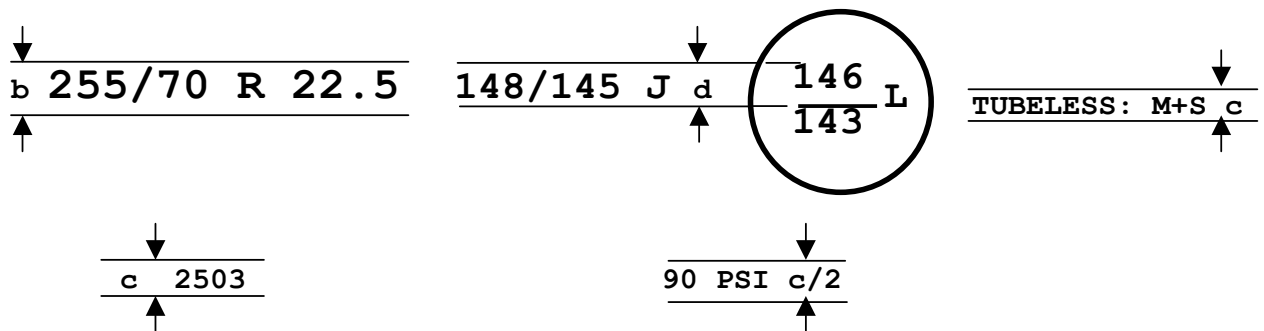
3.1.15. The inscription "FRT" (free rolling tyres) in the case of tyres specifically designed for the equipment of trailers."

Annex 3, amend to read:

"Annex 3

ARRANGEMENT OF TYRE MARKINGS

1.



	MINIMUM HEIGHTS OF MARKINGS (mm)	
	Tyres of nominal rim diameter < 508mm (Code 20) or of nominal section width ≤ 235mm (Code 9)	Tyres of nominal rim diameter ≥ 508mm (Code 20) or of nominal section width > 235mm (Code 9)
b	6	9
c	4	
d	6	

These markings, given as an example, define a pneumatic tyre:

Having a nominal section width of 255;

Having a nominal aspect ratio of 70;

Of radial-ply structure (R);

Having a nominal rim diameter of 572 mm, for which the symbol is 22.5;

Having load capacities of 3,150 kg when single and 2,900 kg when twinned (dual), corresponding respectively to the load indices 148 and 145 shown in annex 4 to this Regulation;

Having a reference speed of 100 km/h corresponding to speed category symbol: J

Classified in the category of use Snow: M+S

Able to be used additionally at 120 km/h (speed category symbol L) with a load capacity of 3,000 kg when single and 2,725 kg when twinned (dual), corresponding respectively to the load indices 145 and 143 shown in annex 4 to this Regulation

Capable of being fitted without inner tube: "TUBELESS"

Manufactured during the twenty-fifth week of the year 2003, and

Requiring to be inflated to 620 kPa for load/speed endurance tests, for which the PSI symbol is 90.

2. In the particular case of tyres having a tyre to rim fitment configuration "A", the marking shall be in the form of the following example:

235-700 R 450A where:

235 is the nominal section width in mm

700 is the outer diameter expressed in mm

R is an indication of the structure of the tyre -see paragraph 3.1.3. of this Regulation

450 is the nominal diameter of the rim expressed in mm

A is the tyre to rim fitment configuration.

The marking of the load index, speed category symbol, date of manufacture and other markings, shall be as given in example 1 above.

3. The positioning and order of the markings constituting the tyre designation shall be the following:

- a) The tyre-size designation as defined in paragraph 2.17. of this Regulation shall be grouped as shown in above examples: 255/70 R 22.5 or 235-700 R 450A;
- (b) The service description comprising the load index/indices and the speed symbol shall be placed immediately after the tyre size designation as defined in paragraph 2.17 of this Regulation;
- (c) The symbols "TUBELESS" and "M+S" or "FRT" or "MPT" (and equivalents) may be at a distance from the tyre size designation
- (d) If paragraph 6.2.5. of "

Annex 7,

Paragraph 2.2.1., amend to read:

"2.2.1. In the case of tyres with a speed category symbol above P, test procedures are specified in paragraph 3."

Paragraph 3., amend to read:

"3. Load/speed test programme for tyre with speed category symbol Q and above

3.1. This programme applies to:

3.1.1. all tyres marked with load capacity index in single 121 or less.

3.1.2. tyres marked with load capacity index in single 122 and above and with the additional marking "C", or "LT", referred to in paragraph 3.1.13. of this Regulation."

Paragraphs 3.1. to 3.5. (former), renumber as paragraphs 3.2. to 3.6.

Annex 7, appendix 1, note (2), amend to read:

" additional marking "LT", or "C", referred to in paragraph 3.1.13. of this Regulation, shall be tested ... "

Annex 4

AD-HOC INFORMAL GROUPS OF GRRF

<u>Name</u>	<u>Chairman</u>	<u>Contact person</u>
Braking compatibility of heavy goods vehicles	<u>1/</u>	<u>1/</u>
Handling and Stability of vehicles	Mr. R.B. Hoogvelt Tel:(+31-15)269-6411 Fax:(+31-15)269-7314 E-mail: hoogvelt@wt.tno.nl	<u>1/</u> Tel: Fax: E-mail:
Tyres	Mr. G. Harvey Tel:(+44-20) 7944-2086 Fax:(+44-20) 7944-2069 E-mail: geoff.harvey@dft.gsi.gov.uk	Mr. G.W. Burford Tel:(+44-20) 7944-2072 Fax:(+44-20) 7944-2069 E-mail: gordon.burford@dft.gsi.gov.uk
Wheels	Mr. H. Hesse Tel:(+49-228) 300-7539 Fax:(+49-228) 300-7409 E-mail: Hans.Hesse@BMVBW.Bund.de	<u>1/</u> Tel: Fax: E-mail:
Steering	Mr. W. Mäder Tel:(+49(0) 89) 32950-611 Fax:(+49(0) 89) 32950-605 E-mail: hw.maeder@tuevs.de	<u>1/</u> Tel: Fax: E-mail:

1/ To be determined
