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World Forum for Harmonization of Vehicle Regulations

Working Party on Brakes and Running Gear

**REPORT OF THE WORKING PARTY ON BRAKES AND RUNNING GEAR (GRRF)
ON ITS SIXTIETH SESSION ¹**

(18 – 22 September 2006)

1. GRRF held its sixtieth session from 18 - 22 September 2006 under the Chairmanship of Mr. I. Yarnold (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): Belgium; Canada; Czech Republic; Denmark; Finland; France; Germany; Hungary; India; Italy; Japan; Netherlands; Norway; Republic of Korea; Republic of South Africa; Russian Federation; Slovakia; Spain; Sweden; Switzerland; United Kingdom; and United States of America. 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); European Association of Automobile Suppliers (CLEPA); International Motorcycle Manufacturers Association (IMMA); European Tyre and Rim Technical Organization (ETRTO); Retread Manufacturers Association (RMA); Speciality Market Equipment Association (SEMA). 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 informal documents distributed during the session are listed in Annex 1 to this report.

¹ Following the agreement by the Executive Committee (AC.3) to the 1998 Agreement (see report ECE/TRANS/WP.29/1052, para. 103), the proper session of the sixtieth GRRF has been extended until Friday, 22 September 2006 to include a meeting of the informal working group on the development of a global technical regulation (gtr) on tyres (see paras. 48 and 49 below).

1. REGULATIONS Nos. 13 AND 13-H (Braking)

1.1. Further development

1.1.1. Removal of M1 category

Documentation: TRANS/WP.29/GRRF/2005/7 and Amend.1; ECE/TRANS/WP.29/GRRF/2006/8 and Corr.1; ECE/TRANS/WP.29/GRRF/2006/33; Informal documents Nos. GRRF-60-03 and GRRF-60-14 of Annex 1 to the report.

3. The expert from the United Kingdom recalled the purpose of the consolidated version of Regulation No. 13 (ECE/TRANS/WP.29/GRRF/2006/8 and Corr.1) aiming at the removal of category M1 vehicles from the scope of Regulation No. 13. Regarding the insertion of transitional provisions, the expert from OICA introduced GRRF-60-03 superseding ECE/TRANS/WP.29/GRRF/2006/33, TRANS/WP.29/GRRF/2005/7 and Amend.1.

4. The Chairman questioned GRRF's decision to submit the proposal as new 11 series of amendments to the Regulation. Following the discussion, GRRF agreed to submit the consolidated text as draft Supplement 4 to the 10 series of amendments to Regulation No. 13. In this respect, the expert from OICA presented GRRF-60-14. GRRF adopted ECE/TRANS/WP.29/GRRF/2006/8 and Corr.1 including the amendments of ECE/TRANS/WP.29/GRRF/2006/33 as reproduced in Annex 2. The secretariat was requested to submit them, as draft Supplement 4 to the 10 series of amendments to Regulation No. 13, to WP.29 and AC.1 for consideration at their March 2007 sessions.

1.1.2. Extension of N1 category (Regulation No. 13-H)

Documentation: ECE/TRANS/WP.29/GRRF/2006/21.

5. Regarding the necessary amendments to Regulation No. 13-H to extend the scope to category N1 vehicles, the expert from OICA introduced ECE/TRANS/WP.29/GRRF/2006/21. GRRF adopted the proposal, unamended, and requested the secretariat to submit it, as draft Supplement 5 to Regulation No. 13-H, to WP.29 and AC.1 for consideration at their March 2007 sessions.

1.1.3. Brake performance of trailers

Documentation: ECE/TRANS/WP.29/GRRF/2006/10; ECE/TRANS/WP.29/GRRF/2006/20.

6. The expert from CLEPA presented ECE/TRANS/WP.29/GRRF/2006/20 to clarify the existing text of Regulation No. 13 and to insert additional provisions for the bedding-in procedure. The expert from Germany confirmed that his concerns on Annex 19 were taken into account in the proposal tabled by CLEPA and withdrew ECE/TRANS/WP.29/GRRF/2006/10. GRRF adopted ECE/TRANS/WP.29/GRRF/2006/20, with the amendments reproduced below. The secretariat was requested to submit the proposal, as a part (para. 4) of draft Supplement 4 to the 10 series of amendments to Regulation No. 13, to WP.29 and AC.1 for consideration at their March 2007 sessions.

Annex 11, Appendix 2, the new inserted paragraph 1.2.1., correct to read:

"1.2.1. Test carried out according to paragraph 3.5.1. of this appendix **from and including Supplement 7 to the 09** series of amendments, which were positive, are deemed to"

1.1.4. Endurance brake systems

Documentation: Informal document No. GRRF-60-04 of Annex 1 to the report.

7. The expert from Germany introduced GRRF-60-04 regarding the generation of a signal to illuminate the stop lamps for vehicles with electric control transmission. He also recalled the purpose of informal documents Nos. GRRF-59-11 and GRRF-57-34, distributed at previous sessions. GRRF underlined the importance of that vehicle safety issue. Following the discussion, GRRF agreed to resume consideration on this subject at its next session. The expert from CLEPA was invited to prepare a consolidated proposal, taking into account the comments received.

1.1.5. Parking brake systems

Documentation: ECE/TRANS/WP.29/GRRF/2006/3; Informal document No. GRRF-60-15 of Annex 1 to the report.

8. The expert from Germany recalled the purpose of ECE/TRANS/WP.29/GRRF/2006/3 regarding special requirements for the electric transmission of parking brake systems. GRRF adopted the document with the amendments reproduced below and requested the secretariat to submit the proposal to WP.29 and AC.1, for consideration at their March 2007 sessions, as a part (paras. 4 and 6) of draft Supplement 4 to the 10 series of amendments to Regulation No. 13.

Paragraph 5.2.1.26.2.2., correct "and the (first) ECU" to read "and the ECU".

Paragraph 5.2.1.26.2.3., correct to read:

"5.2.1.26.2.3. within the electrical control transmission **of the** parking braking system, this yellow warning signal shall be signalled **as soon as the** break"

9. The expert from CLEPA presented GRRF-60-15 regarding similar amendments to Regulation No. 13-H. GRRF adopted the proposal as reproduced in Annex 3 to this report. The secretariat was requested to submit it to WP.29 and AC.1 for consideration at their March 2007 sessions, as a part (para. 5) of draft Supplement 5 to Regulation No. 13-H.

1.1.6. Emergency stop signal (ESS)

Documentation: ECE/TRANS/WP.29/GRRF/2006/29; ECE/TRANS/WP.29/GRRF/2006/30; ECE/TRANS/WP.29/GRRF/2006/31.

10. The expert from OICA introduced a proposal regarding the insertion into Regulation No. 13-H of new provisions for emergency braking (ECE/TRANS/WP.29/GRRF/2006/29). GRRF

adopted the document with the amendments reproduced below and requested the secretariat to submit it, on an exceptional basis, as draft Supplement 4 to Regulation No. 13-H to WP.29 and AC.1 for consideration at their November 2006 sessions (ECE/TRANS/WP.29/2006/141).

Paragraph 5.2.23.1., correct "system at or above 6 m/s²" to read "system at a **deceleration of** or above 6 m/s²".

11. The expert from OICA introduced ECE/TRANS/WP.29/GRRF/2006/30 and ECE/TRANS/WP.29/GRRF/2006/31 proposing amendments to Regulations Nos. 13 and 13-H in order to harmonize, in case of "automatically commanded braking", the requirements for the activation of stop lamps at speeds below and above 50 km/h. GRRF adopted both proposals, unamended, and requested the secretariat to submit them to WP.29 and AC.1, for consideration at their March 2007 sessions, as a part (paras. 4, 6 and 8) of draft Supplement 4 to the 10 series of amendments to Regulation No. 13, and as a part (paras. 5 and 9) of draft Supplement 5 to Regulation No. 13-H, respectively.

1.1.7. Other business

Documentation: ECE/TRANS/WP.29/GRRF/2006/15; ECE/TRANS/WP.29/GRRF/2006/16; ECE/TRANS/WP.29/GRRF/2006/18, ECE/TRANS/WP.29/GRRF/2006/19; Informal document No. GRRF-60-11 of Annex 1 to the report.

12. The expert from CLEPA withdrew documents ECE/TRANS/WP.29/GRRF/2006/15 and ECE/TRANS/WP.29/GRRF/2006/16. GRRF considered and adopted the proposals by Germany (ECE/TRANS/WP.29/GRRF/2006/18 and ECE/TRANS/WP.29/GRRF/2006/19) to align the requirements in Regulations Nos. 13 and 13-H with regard to the value "g" of the gravitational acceleration. The secretariat was requested to submit them, as a part (paras. 4, 6, 8 and 11) of draft Supplement 4 to the 10 series of amendments to Regulation No. 13, and as a part (paras. 5, 9 and 11) of draft Supplement 5 to Regulation No. 13-H to WP.29 and AC.1 for consideration at their March 2007 sessions, respectively.

13. The expert from India introduced GRRF-60-11 regarding the alignment of the type I test (fade test) under Regulations Nos. 13 and 13-H. GRRF noted a number of comments and agreed to resume consideration of this item at its next session on the basis of a new proposal by India.

1.2. Facilitation of testing of vehicles in service

Documentation: ECE/TRANS/WP.29/GRRF/2004/23/Rev.1; ECE/TRANS/WP.29/GRRF/2006/17; ECE/TRANS/WP.29/GRRF/2006/32; Informal documents Nos. GRRF-60-05, GRRF-60-13, GRRF-60-16, GRRF-60-17 and GRRF-60-18 of Annex 1 to this report.

14. GRRF resumed consideration of the proposal by the United Kingdom regarding Periodical Technical Inspection (PTI) and wear indicators on service brake linings in Regulation No. 13 (ECE/TRANS/WP.29/GRRF/2004/23/Rev.1). The expert from OICA introduced GRRF-60-13 complementing ECE/TRANS/WP.29/GRRF/2006/32 with transitional provisions.

15. The expert from Spain, in his role as Chairman of the CITA working group on brake testing, announced that the next "2006 CITA conference" would take place in Hanoi, from 17 to 20 October 2006 (GRRF-60-17). He invited all GRRF experts to participate in that conference. He also introduced GRRF-60-05 clarifying the position of CITA on ECE/TRANS/WP.29/GRRF/2004/23/Rev.1 and ECE/TRANS/WP.29/GRRF/2006/32.

16. Following the discussion, the expert from the United Kingdom presented GRRF-60-16 taking into account all comments received. GRRF adopted the proposal as reproduced in Annex 4 to this report. The secretariat was requested to submit it to WP.29 and AC.1 for consideration at their March 2007 sessions, as a part (paras. 4, 6, 8, 11 and 12) of draft Supplement 4 to the 10 series of amendments to Regulation No. 13.

17. The expert from Germany introduced ECE/TRANS/WP.29/GRRF/2006/17 proposing similar PTI amendments to Regulation No. 13-H. The document received some comments. The expert from the United Kingdom summarized the outcome of the discussion in GRRF-60-18. GRRF adopted the proposal as reproduced in Annex 5 to this report. The secretariat was requested to submit it to WP.29 and AC.1, for consideration at their March 2007 sessions, as a part (paras. 5, 9, 11 and 12) of draft Supplement 5 to Regulation No. 13-H.

1.3. Development of a passenger vehicle braking gtr

18. The Chairman recalled the decision by the Executive Committee (AC.3) to the 1998 Agreement to suspend temporarily the work of the informal group on passenger vehicle gtr on braking (PVGTR). GRRF agreed to resume its consideration at the next session, awaiting the adoption of the gtr on motorcycle brake systems.

2. MOTORCYCLE BRAKING

2.1. Harmonization of motorcycle braking requirements

Documentation: ECE/TRANS/WP.29/2006/132, ECE/TRANS/WP.29/2006/133,
ECE/TRANS/WP.29/GRRF/2006/13.

19. The expert from Canada reported on the results of the Special GRRF session held in Geneva on 19 June 2006 (see report ECE/TRANS/WP.29/GRRF/2006/13). He stated that, during that session, the group had agreed on the draft gtr on motorcycle brake systems which had been submitted to WP.29 and AC.3, for consideration and voting at their November 2006 sessions (see ECE/TRANS/WP.29/2006/132).

20. The EC expert added that the group had also adopted a proposal to align the technical provisions of Regulation No. 78 with those of the draft gtr (see ECE/TRANS/WP.29/2006/133).

21. The expert from Germany stated that during that Special GRRF session he had presented a number of amendments to improve the text of the draft gtr. He expressed his disappointment that not all of the proposed amendments had been taken into account in the final text. GRRF agreed with the Chairman's suggestion to resume consideration of these remaining issues at a further stage, after

the establishment of the gtr into the Global Registry.

3. REGULATION No. 90 (Replacement brake linings)

Documentation: TRANS/WP.29/GRRF/2005/17; ECE/TRANS/WP.29/GRRF/2006/24.

22. The expert from Germany recalled the purpose of TRANS/WP.29/GRRF/2005/17 regarding the insertion of new provisions into the Regulation concerning a performance test for bedding of brake linings. He also introduced ECE/TRANS/WP.29/GRRF/2006/24 proposing a further clarification. The expert from France reported on the ongoing study in his country on the sensitivity regarding the bedding of brake linings on brake performance. He stated that some issues still remained unsolved. GRRF experts were invited to attend future meetings of the informal group on replacement brake linings.

23. GRRF agreed, on the basis of the discussion, to adopt TRANS/WP.29/GRRF/2005/17 as amended by ECE/TRANS/WP.29/GRRF/2006/24. The secretariat was requested to submit the proposal to WP.29 and AC.1, for consideration at their March 2007 sessions, as draft Supplement 9 to the 01 series of amendments to Regulation No. 90.

4. REGULATION No. 79 (Steering equipment)

24. GRRF recalled its decision of the previous session (see ECE/TRANS/WP.29/GRRF/59, para. 17) and deferred its consideration to the next GRRF session, awaiting a new proposal by the Russian Federation.

5. TYRES

5.1. Harmonization of tyre Regulations

Documentation: ECE/TRANS/WP.29/2006/139; Informal documents Nos. GRRF-60-06 and GRRF-60-21 of Annex 1 to this report.

25. GRRF noted the proposal submitted to WP.29 and AC.3 to develop a gtr on tyres (ECE/TRANS/WP.29/2006/139, submitted by France, as sponsor of the gtr). Mr. I. Yarnold, also chairing the informal working group to develop a gtr on tyres (tyre-gtr), informed GRRF about AC.3's decision that the informal group should continue his work. Referring to GRRF-60-06 and GRRF-60-21, he added that the group would meet on 21 (afternoon only) and 22 September 2006. He announced his intention to inform WP.29 and AC.3 at their forthcoming November sessions about the progress made by the informal working group.

26. GRRF agreed with the Chairman's suggestion that the informal group should also meet again in Geneva, prior to the sixty-first GRRF session, on Monday morning, 5 February 2007. Delegates were requested to submit their proposal on this subject not later than 26 January 2007 to the secretary of the informal working group (info@etrto.org).

5.2. Regulation No. 30 (Pneumatic tyres)

Documentation: TRANS/WP.29/GRRF/2003/10; TRANS/WP.29/GRRF/2003/30 and Corr.1; ECE/TRANS/WP.29/GRRF/2006/22; Informal document No. GRRF-60-22 of Annex 1 to this report.

27. The expert from ETRTO introduced ECE/TRANS/WP.29/GRRF/2006/22 proposing additional provisions to Regulation No. 30 for the insertion of a new tyre to rim fitment configuration referred to as type "U". He added that these tyres have an asymmetrical bead construction and that the installation requirements would become part of the ETRTO tyre and rim specifications. GRRF adopted the proposal, unamended, and requested the secretariat to submit it to WP.29 and AC.1 for consideration at their March 2007 sessions, as draft Supplement 15 to the 02 series of amendments to Regulation No. 30.

28. The expert from the Russian Federation recalled the purpose of TRANS/WP.29/GRRF/2003/10 and TRANS/WP.29/GRRF/2003/30. The expert from ETRTO reported on the ongoing work regarding the development of a proposal on tyre rolling resistance aimed at including new provisions in the ISO standard concerned. He announced that further meetings on this subject would be held in December 2006 and in February 2007. The EC expert underlined the importance of this wide-ranging issue with regard to the environmental protection. He welcomed the work of the ISO group in developing test methods for rolling resistance, since it was essential to have a robust test method before proceeding with any regulatory work in this area.

29. GRRF welcomed a presentation by the expert from the Russian Federation on the same subject (GRRF-60-22). He suggested preparing, in cooperation with ETRTO, a proposal on this subject. GRRF agreed to resume consideration at its next session in February 2007.

5.3. Regulation No. 64 (Temporary use spare wheels/tyres)

Documentation: ECE/TRANS/WP.29/GRRF/2002/17/Rev.6; ECE/TRANS/WP.29/GRRF/2006/23; Informal documents Nos. GRRF-60-08, GRRF-60-10 and GRRF-60-19 of Annex 1 to this report.

30. Recalling the discussion at the previous GRRF session on Regulation No. 64, the expert from the United Kingdom presented a revised proposal to clarify the existing requirements for vehicles fitted with run-flat tyres (ECE/TRANS/WP.29/GRRF/2002/17/Rev.6 as amended by GRRF-60-08). The expert from Germany maintained his reservation on that proposal. The expert from ETRTO introduced ECE/TRANS/WP.29/GRRF/2006/23 and GRRF-60-10 proposing further amendments to the proposal tabled by the United Kingdom. There was agreement that for vehicles equipped with run flat tyres, the driver would have to be informed by a run-flat warning system (RFWS) when a tyre was deflated. A number of GRRF experts preferred to strengthen the test performance requirements with regard to the test speed and detection time.

31. The expert from Germany introduced GRRF-60-19 raising concerns on tyre pressure monitoring systems (TPMS). He stated that, at the present time, TPMS components have a high number of failures. He added that test requirements for TPMS components should not be inserted in Regulation No. 64, but should be adopted as a new UNECE Regulation. Upon the invitation of the

Chairman, he volunteered to prepare a formal proposal for consideration at the next GRRF session. The expert from the United States of America informed GRRF about recent complaints that have been addressed to NHTSA's Office of Defects Investigations regarding failures of TPMS (website address: <http://www-odi.nhtsa.dot.gov/cars/problems/recalls/recallsearch.cfm>). A number of delegates preferred to wait until the revision of the ISO 21750 (TPMS) standard before making any proposals. GRRF acknowledged that TPMS is a complex issue and agreed to resume consideration of this subject at its February 2007 session on the basis of a proposal by Germany.

32. Concluding the discussion, the Chairman did not agree on the need to establish an informal working group on this subject. He invited all experts to think about all possible solutions and suggested to resume consideration at the next GRRF session.

5.4. Regulation No. 106 (Pneumatic tyres for agricultural vehicles)

Documentation: ECE/TRANS/WP.29/GRRF/2006/25.

33. The expert from ETRTO proposed amendments to Annex 9 of Regulation No. 106 aiming at allowing the load/speed tests to be performed on test drums larger than 1.7 m in diameter (ECE/TRANS/WP.29/GRRF/2006/25). GRRF adopted the proposal without amendment. The secretariat was requested to submit it to WP.29 and AC.1, for consideration at their March 2007 sessions, as draft Supplement 5 to Regulation No. 106.

5.5. Regulation No. 109 (Retreaded pneumatic tyres for commercial vehicles and their trailers)

Documentation: ECE/TRANS/WP.29/GRRF/2006/11; ECE/TRANS/WP.29/GRRF/2006/26; Informal document No. GRRF-60-01 of Annex 1 to this report.

34. The expert from BIPAVER introduced ECE/TRANS/WP.29/GRRF/2006/26 proposing new provisions for retreaded tyres with additional sidewall protection. He complemented the proposal with explanatory information (GRRF-60-01). GRRF noted a number of comments and concerns about the possible "kissing" of twin wheel tyres and the possible danger of overheating, due to friction. GRRF agreed to resume consideration of this subject at its next session. For that purpose, the experts from BIPAVER and OICA were invited to study this issue, taking into account the usual clearance of laden/unladen vehicles with twin wheeled axles.

35. The expert from ETRTO introduced ECE/TRANS/WP.29/GRRF/2006/11 proposing an increase of the tolerances for the section width of retreaded tyres. GRRF adopted the document with the amendments reproduced below and requested the secretariat to submit it, as draft Supplement 4 to Regulation No. 109, to WP.29 and AC.1 for consideration at their March 2007 sessions.

Paragraph 6.5.4., correct to read:

"6.5.4. After retreading, the dimensions this Regulation. Note that:

- (a) the maximum outer diameter of a retreaded tyre may be up to 1.5 per cent greater than the maximum outer diameter of **the same tyre size designation** permitted by Regulation No. 54;

- (b) and the maximum section width of a radial retreaded tyre may be up to 1.5 per cent greater than the maximum section width of **the same tyre size designation** permitted by Regulation No. 54."

5.6. Regulation No. 117 (Tyres rolling sound)

Documentation: ECE/TRANS/WP.29/GRRF/2006/27.

36. The expert from the United Kingdom introduced ECE/TRANS/WP.29/GRRF/2006/27 proposing to clarify the valid test result information for tyres tested according to the wet-adhesion requirements. GRRF adopted the proposal and requested the secretariat to submit the adopted text to GRB (see ECE/TRANS/WP.29/2007/8), for information at its forty-fifth session in February 2007, and, to WP.29 and AC.1, for consideration at their March 2007 sessions, as draft Corrigendum 2 to Regulation No. 117.

5.7. Exchange of information on national and international tyre requirements

37. GRRF noted that no new information was received on this subject.

6. OTHER BUSINESS

6.1. Electronically controlled stability enhancement systems

Documentation: ECE/TRANS/WP.29/GRRF/2006/34; Informal documents Nos. GRRF-60-07 and GRRF-60-20 of Annex 1 to this report.

38. Mr. L. Palkovics (Hungary), chairing the informal group on Electronic Vehicle Stability Control (EVSC), reported on the group's progress of work. As a result, he introduced ECE/TRANS/WP.29/GRRF/2006/34 proposing the insertion into Regulation No. 13 of new provisions for electronically controlled vehicle stability enhancement systems. He reported on the group's discussion which had resulted in a conflict of performance requirements and vehicle designs. He sought GRRF's advice on the applicability (mandatory or optional) of such EVSC requirements. A number of delegates recommended having EVSC requirements mandatory for coaches and ADR vehicles only, subject to the decision of the Working Party on the Transport of Dangerous Goods (WP.15). The expert from the EC expressed his preference to mandate those requirements for heavy-duty goods and passenger vehicles (vehicles of categories M₃ and N₃) and to include vehicles of categories M₂ and N₂ eventually at a later stage. The expert from OICA preferred to start, in the case of a mandatory installation, with specific performance requirements for a limited applicability including transitional provisions. He suggested extending the scope in a later step taking into account the experience gained. The expert from CLEPA raised the need to consider also in detail the compatibility of different possible combinations of trucks and trailers equipped with or without EVSC systems. The expert from Japan presented his position (GRRF-60-07) on the informal group's proposal.

39. GRRF followed with interest a presentation by the expert from the United States of America on NHTSA's notice of a proposed rule making on electronic stability control (GRRF-60-20) for

passenger cars and light trucks/vans.

40. Concluding the discussion, the GRRF Chairman suggested to take a final decision of this subject at the next GRRF session. For that purpose, he invited all delegates to think about their position on the scope of EVSC systems. Mr. Palkovics announced that the next informal meeting on EVSC would possibly take place in Paris and invited all experts to take part in that meeting.

6.2. Clarification of the scope of Regulations covered by GRRF

Documentation: Informal document No. GRRF-60-12 of Annex 1 to this report.

41. The EC expert introduced GRRF-60-12 regarding amendments to the scopes of Regulations Nos. 30, 54, 75, 108 and 109. GRRF noted some comments and study reservations on that proposal.

42. As no common agreement could be reached, GRRF agreed to resume consideration of this subject at the next GRRF session. The secretariat requested to distribute GRRF-60-12 with an official symbol.

6.3. Exchange of information on national and international safety requirements

Documentation: ECE/TRANS/WP.29/GRRF/2006/28.

43. GRRF noted the request for information (ECE/TRANS/WP.29/GRRF/2006/28) tabled by the expert from the United Kingdom with regard to coupling and un-coupling of motor vehicle and trailer combinations. The experts from Spain, CLCCR and OICA volunteered to gather information for consideration at the next GRRF session.

44. The EC expert announced his intention to prepare a proposal to insert into Regulation No. 13-H new requirements for brake assistance systems with regard to pedestrian protection. He added that the EC's intention to put forward an Internet consultation on the need of a restructured EU Directive concerning the new prescriptions for tyres regarding wet grip adhesion and noise level reduction. GRRF also noted the intention of the EC to apply Regulation No. 55 (mechanical couplings) and to make the application of Regulations Nos. 108 and 109 mandatory in the European Union.

6.4. Regulation No. 55 (Mechanical couplings)

Documentation: Informal document No. GRRF-60-09 of Annex 1 to this report.

45. The Chairman informed GRRF that WP.29 had given, during its March 2006 session, the consent to establish the informal group on mechanical couplings. The expert from Germany reported on the outcome of the first informal meeting in Paris (France) in June 2006 and announced the group's intention to convene again in Darmstadt (Germany) in November 2006. He introduced GRRF-60-09 proposing the terms of reference and the rules of procedure for the new informal group. GRRF adopted the proposal as reproduced in Annex 6 to this report. The Chairman suggested resuming consideration of this subject at its next session.

7. ELECTION OF OFFICERS

46. In compliance with Rule 37 of the Rules of Procedure (TRANS/WP.29/690), GRRF called the election of officers on Monday afternoon. Mr. I. Yarnold (United Kingdom) was unanimously re-elected Chairman of GRRF for the sessions scheduled for the year 2007.

AGENDA FOR THE NEXT SESSION

47. GRRF did not consider the agenda for the sixty-first session to be held in Geneva, from 5 (14.30 h) to 9 (12.30 h) February 2007. It was agreed that the Chairman, jointly with the secretariat, would propose a draft agenda.²

INFORMAL WORKING GROUP ON THE DEVELOPMENT OF A GTR ON TYRES

48. The informal GRRF working group on the development of a global technical regulation (gtr) on tyres convened on 21 (afternoon only) and 22 September 2006 under the Chairmanship of Mr. I. Yarnold (United Kingdom). Experts from the following countries and organizations participated in the work: Canada; Czech Republic; Denmark; Finland; France; Germany; Hungary; India; Italy; Japan; Netherlands; Norway; Republic of South Africa; Russian Federation; Switzerland; United Kingdom; United States of America; European Commission (EC); International Organization of Motor Vehicle Manufacturers (OICA); International Motorcycle Manufacturers Association (IMMA); European Tyre and Rim Technical Organization (ETRTO); Retread Manufacturers Association (RMA).

49. The informal group made good progress on the scope of the gtr as well as on the harmonization of the basic test methods for tyres (high speed test and endurance test following by a low pressure test). The group also considered some additional tests for tyres (plunger energy test and bead unseating test) to take into account road conditions in countries with a bad road infrastructure. The discussion on the need to include further tests (tyre/road sound emissions, tyre wet grip adhesion, tyre rolling resistance and ageing) was deferred to a later time point. The working papers of the informal working group are available at the GRRF website at the following address:

<http://www.unece.org/trans/main/wp29/wp29wgs/wp29grrf/grrf-inf tyre1.html>

² To help delegates make arrangements for travel and accommodation, the Chairman advises delegates that braking items will be discussed at the end of the session.

Annex 1LIST OF INFORMAL DOCUMENTS DISTRIBUTED WITHOUT A SYMBOL
DURING THE SIXTIETH SESSION (GRRF-60-....)

No.	Transmitted by	Agenda item	Language	Title	Follow-up
1.	BIPAVER	5.5.	E	Explanatory information to ECE/TRANS/WP.29/GRRF/2006/26 regarding additional sidewall protection (ASP)	(a)
2.	Chairman	-	E	Provisional agenda, running order	(a)
3.	OICA	1.1.	E	Proposal for amendments to ECE/TRANS/WP.29/GRRF/2006/33	(a)
4.	CLEPA/ OICA	1.1.4.	E	Stop lamp illumination	(a)
5.	CITA	1.2	E	Position of CITA working group on "Brake testing"	(a)
6.	Tyre gtr	5.1.	E	Draft agenda for informal working group for a gtr on tyres	(a)
7.	Japan	6.1.	E	Japan's comments on ECE/TRANS/WP.29/GRRF/2006/34, an amendment proposal to Regulation No. 13	(a)
8.	United Kingdom	5.3.	E	Draft amendments to Regulation No. 64	(a)
9.	Couplings	6.4.	E	GRRF informal group on coupling devices: Proposal for terms of reference and rules of procedure	(a)
10.	ETRTO	5.3.	E	UNECE Regulation No. 64: Homologation test of "run-flat warning systems" (RFWS) for "run-flat" tyres (RF)	(a)
11.	India	1.1.7.	E	Comments from India on ECE Regulations Nos. 13 and 13-H	(a)
12.	European Commission	6.2.	E	Proposal for collective amendments to Regulations Nos. 30, 54, 75, 108 and 109	(b)
13.	OICA	1.2.	E	Proposal for amendments to ECE/TRANS/WP.29/GRRF/2006/32	(a)
14.	OICA	1.1.1.	E	Proposal for amendments to ECE/TRANS/WP.29/GRRF/2006/33	(a)
15.	Germany/ CLEPA	1.1.5.	E	Proposal for amendments to Regulation No. 13-H (Braking)	(a)
16.	United Kingdom	1.2.	E	Proposal for amendments to Regulation No. 13	(a)

No.	Transmitted by	Agenda item	Language	Title	Follow-up
17.	Spain/CITA	1.2.	E	2006 CITA conference in Hanoi, Vietnam	(a)
18.	United Kingdom	1.2.	E	Proposal for draft amendments to Regulation No. 13-H	(a)
19.	Germany	5.3.	E	UNECE Regulation No. 64: Heavy concerns about type pressure monitoring systems (TPMS)	(a)
20.	USA	6.1.	E	Electronic stability control: NHTSA's notice of proposed rulemaking	(a)
21.	ETRTO	5.1.	E	Understanding global tire regulations	(a)
22.	Russian Federation	5.2.	E	Rolling resistance problem consideration	(a)

Notes:

- (a) Consideration completed or superseded
- (b) Continue consideration at the next session with official symbol

Annex 2

Amendments to ECE/TRANS/WP.29/GRRF/2006/8 and Corr.1
(adopted by GRRF at its sixtieth session, see para. 4)

Paragraphs 1. and 1.1., amend to read (including footnotes */ and **/):

"1. SCOPE

1.1. This Regulation applies to **vehicles of categories M2, M3, N and O */ with regard to braking **/.**

*/ **As defined in Annex 7 to the Consolidated Resolution on the Construction of Vehicles (R.E.3) (TRANS/WP.29/78/Rev.1/Amend.2, as last amended by Amend.4).**

/ **In accordance with the application dates contained in paragraph 12. of this Regulation, braking requirements for vehicles of category M1 are exclusively included in Regulation No. 13-H. For vehicles of category N1, Contracting Parties that are signatories to both Regulation No. 13-H and this Regulation shall recognize approvals to either Regulation as equally valid."

Paragraph 12.1.1., should be deleted.

Paragraphs 12.1.1.1., 12.1.1.2. and 12.1.1.3. (former), renumber as paragraphs 12.1.1., 12.1.2. and 12.1.3.

Insert new paragraphs 12.1.4. and 12.1.5., to read:

"12.1.4. As from the official date of entry into force of Supplement 4 of the 10 series of amendments, no Contracting Party applying this Regulation shall refuse to grant approval under this Regulation as amended by Supplement 4.

12.1.5. Contracting Parties applying this Regulation shall not refuse to grant extensions of approval to the preceding series of amendments to this Regulation."

Paragraph 12.1.2. (former), re-number as paragraph 12.2.

Paragraphs 12.1.2.1. to 12.1.2.3.2., should be deleted.

Paragraph 12.1.2.4., re-number as paragraph 12.2.1.

Paragraphs 12.1.2.5. and 12.1.2.6. (former), re-number as paragraphs 12.2.2. and 12.2.3.

Insert a new paragraph 12.2.4., to read:

"12.2.4. For vehicles of category M1, until 48 months after the date of entry into force of

the 10 series of amendments to this Regulation, Contracting Parties applying this Regulation may continue to grant ECE approvals to Supplement 3 to the 10 series of amendments to this Regulation."

Insert a new paragraph 12.3., to read:

"12.3. Limit of validity of old type approvals"

Paragraph 12.1.2.7., re-number as paragraph 12.3.1.

Paragraphs 12.1.3. to 12.3 (former), should be deleted.

Insert new paragraphs 12.4. and 12.4.1., to read:

"12.4. New Contracting Parties

12.4.1. Notwithstanding the transitional provisions above, Contracting Parties whose application of this Regulation comes into force after the date of entry into force of the most recent series of amendments are not obliged to accept approvals which were granted in accordance with any of the preceding series of amendments to this Regulation."

Annex 3

Amendments to Regulation No. 13-H (Braking)
(adopted by GRRF at its sixtieth session, see para. 9)

Paragraph 5.2.19.2., amend to read:

"5.2.19.2. In the case of **an electrical failure in the control or** a break in the wiring within the electric control transmission **between the control and the ECU directly connected with it**, excluding the energy supply, it shall remain possible to apply the parking braking system from the driver's seat and thereby be capable of holding the laden vehicle stationary on an 8 per cent up or down gradient. Alternatively, in this case, an automatic actuation of the parking brake is allowed when the vehicle is stationary, provided that the above performance is achieved and, once applied, the parking brake remains engaged independently of the status of the ignition (start) switch. In this alternative, the parking brake shall be automatically released as soon as the driver starts to set the vehicle in motion again. The engine/manual transmission or the automatic transmission (park position) may be used to achieve or assist in achieving the above performance."

Paragraph 5.2.19.2.1., amend to read:

"5.2.19.2.1. A break in the wiring within the **electrical** transmission, or an electrical failure in the control of the parking braking system shall be signalled to the driver by the yellow warning signal specified in paragraph 5.2.21.1.2. When caused by a break in the wiring within the electrical control transmission of the parking braking system, this yellow warning signal shall be signalled **as soon as the** break occurs. In addition, such an **electrical** failure in the control or break in the wiring"

Annex 4

Amendments to Regulation No. 13 (Braking)
(adopted by GRRF at its sixtieth session, see para. 16)

Paragraphs 5.2.1.11.2.1. and 5.2.1.11.2.2., amend to read:

"5.2.1.11.2.1. It shall be possible to easily **assess** this wear on service brake linings from the outside or underside of the vehicle, **without the removal of the wheels, by the provision of appropriate inspection holes or by some other means. This may be achieved by utilizing simple standard workshop tools or common inspection equipment for vehicles.** Alternatively, acoustic or optical devices **fitted to at least one lining per brake per wheel which will** warn the driver at his driving position when lining replacement is necessary are acceptable. The yellow warning signal specified in paragraph 5.2.1.29.1.2. below may be used as the optical warning signal.

5.2.1.11.2.2. Assessment of the wear condition of the friction surfaces of brake discs or drums may only be performed by direct measurement of **the actual component or examination of any brake disc or drum wear indicators**, which may necessitate some level of disassembly. Therefore, at the time of type approval, the vehicle manufacturer shall define the following:

- (a) **The method by which wear of the friction surfaces of drums and discs may be assessed, including the level of disassembly required and the tools and process required to achieve this.**
- (b) Information defining the maximum acceptable wear limit at the point at which replacement becomes necessary.

This information shall be made freely available, e.g. vehicle handbook or electronic data record."

Paragraphs 5.2.2.8.2.1. and 5.2.2.8.2.2., amend to read:

"5.2.2.8.2.1. It shall be possible to easily **assess** this wear on service brake linings from the outside or underside of the vehicle, **without the removal of the wheels, by the provision of appropriate inspection holes or by some other means. This may be achieved by utilizing simple standard workshop tools or common inspection equipment for vehicles.** Alternatively, **a trailer mounted display providing information when lining replacement is necessary or an optical device fitted to at least one lining per brake per wheel which will** warn the driver at his driving position when lining replacement is necessary are acceptable. The yellow warning signal specified in paragraph 5.2.1.29.2. above may be used as the optical warning signal provided that signal complies with the requirements of paragraph 5.2.1.29.6. above."

5.2.2.8.2.2. Assessment of the wear condition of the friction surfaces of brake discs or drums may

only be performed by direct measurement of the actual component **or examination of any brake disc or drum wear indicators**, which may necessitate some level of disassembly. Therefore, at the time of type approval, the vehicle manufacturer shall define the following:

- (a) The method by which wear of the friction surfaces of drums and discs may be assessed, including the level of disassembly required and the tools and process required to achieve this.
- (b) Information defining the maximum acceptable wear limit at the point at which replacement becomes necessary.

This information shall be made freely available e.g. vehicle handbook or electronic data record."

Annex 5

Amendments to Regulation No. 13-H (Braking)
(adopted by GRRF at its sixtieth session, see para. 17)

Paragraph 5.1.1.5., should be deleted.

Paragraph 5.1.1.6., renumber as paragraph 5.1.1.5.

Add new paragraphs 5.1.4. to 5.1.4.3., to read:

"5.1.4. Provisions for the periodic technical inspection of braking systems

5.1.4.1. It shall be possible to assess the wear condition of the components of the service brake that are subject to wear e.g. friction linings and drums/discs (in the case of drums or discs, wear assessment may not necessarily be carried out at the time of periodic technical inspection). The method by which this may be realized is defined in paragraphs 5.2.11.2. of this Regulation.

5.1.4.2. It shall be possible to verify, in a simple way, the correct operational status of those complex electronic systems which have control over braking. If special information is needed, this shall be made freely available.

5.1.4.2.1. At the time of type approval, the means implemented to protect against simple unauthorized modification of the operation to the verification means chosen by the manufacturer (e.g. warning signal) shall be confidentially outlined. Alternatively, this protection requirement is fulfilled when a secondary means of checking the correct operational status is available.

5.1.4.3. It shall be possible to generate maximum braking forces under static conditions on a rolling road or roller brake tester."

Paragraphs 5.2.11.2. to 5.2.11.2.2., amend to read:

"5.2.11.2. Checking the wear of the service brake friction components

5.2.11.2.1. It shall be possible to easily assess this wear on service brake linings from the outside or underside of the vehicle, without the removal of the wheels, by the provision of appropriate inspection holes or by some other means. This may be achieved by utilizing simple standard workshop tools or common inspection equipment for vehicles. Alternatively, acoustic or optical devices fitted to at least one lining per brake per wheel which will warn the driver at his driving position when lining replacement is necessary are acceptable. The yellow warning signal specified in paragraph 5.2.21.1.2. below may be used as the optical warning signal."

- 5.2.11.2.2. Assessment of the wear condition of the friction surfaces of brake discs or drums may only be performed by direct measurement of **the** actual component **or examination of any brake disc or drum wear indicators**, which may necessitate some level of disassembly. Therefore, at the time of type approval, the vehicle manufacturer shall define the following:
- (a) The method by which wear of the friction surfaces of drums and discs may be assessed, including the level of disassembly required and the tools and process required to achieve this.
 - (b) Information defining the maximum acceptable wear limit at the point at which replacement becomes necessary.

This information shall be made freely available, e.g. vehicle handbook or electronic data record."

Insert new paragraphs 12. and 12.1., to read:

"12. TRANSITIONAL PROVISIONS

- 12.1. Until 24 months after the date of entry into force of Supplement 5 to the original version of this Regulation, Contracting Parties applying this Regulation may continue to grant ECE approvals to the un-amended Regulation."**

Annex 6

Terms of reference and rules of procedure
for the informal working group on coupling devices (Regulation No. 55)
(adopted by GRRF at its sixtieth session, see para. 45)

Terms of reference:

1. The informal group shall consider the necessity to add alternative test procedures and – if necessary - further amendments and corrections to Regulation No. 55 (coupling devices), for consideration by GRRF.
2. The basis of the discussion will be informal document No. GRRF-58-5.
3. If necessary, the informal group shall develop a complementary test method and propose alternative judgement criteria. In its work, the informal group will take into consideration amongst others the technical expertise of "CARLOS TC" as well as the results of the discussions held in the informal group and at GRRF.
4. The target completion date for the informal group shall be the sixty-third session of GRRF (February 2008).

Rules of procedure:

1. The informal group is open to all participants of GRRF. A limitation of number of participants from any country and organization to participate in the informal group is actually not foreseen.
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 at least two weeks 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 GRRF.
7. The progress of the informal group generally will be reported as an informal document and presented by the chairman or another participant of the group delegated on the recent meeting.
8. All working documents should be distributed in digital form, the creation of an own website is actually not foreseen.

Annex 7

GRRF INFORMAL GROUPS

<u>Informal group on</u>	<u>Chairperson</u>	<u>Secretary</u>
Passenger vehicle braking gtr (PVGTR)	Mr. I. Yarnold Tel: 44 207 944 2080 Fax: 44 207 944 2169 E-mail: ian.yarnold@dft.gsi.gov.uk	Mr. M. Brearley (CLEPA) E-mail: malcolm.brearley-contr@trw.com
Motorcycle braking gtr (MCGTR)	Mr. D. Davis Tel: 1 613 998 1956 Fax: 1 613 990 2913 E-mail: davisda@tc.gc.ca	Mr. P. Chesnel (IMMA) Tel: 41 22 920 2120 Fax: 41 22 920 2121 E-mail: pchesnel@immamotorcycles.org
TYRE gtr	Mr. I. Yarnold Tel: 44 207 944 2080 Fax: 44 207 944 2169 E-mail: ian.yarnold@dft.gsi.gov.uk	Mr. J.-C. Noirhomme (ETRTO) Tel: 32 2 344 4059 Fax: 32 2 344 1234 E-mail: info@etrto.org
Brake linings	Mr. W. Rothmann Tel: 49 2171 501 577 Fax: 49 2171 501 530 E-mail: wrothmann@tmdfriction.com	<u>1/</u>
Replacement Discs and Drums (RD&D)	Mr. W. Gaupp Tel: 49 201 825 4139 Fax: 49 201 825 4185 E-mail: wgaupp@tuev-nord.de	<u>1/</u>
Electronic Vehicle Stability Control (EVSC)	Mr. L. Palkovics (c/o: Mr. G. Brett) Tel: 36 1 371 5950 Fax: 36 1 203 1167 E-mail: brett@tuvnord.hu	CLEPA
Mechanical couplings	Mr. A. Sigwart Tel: 49 221 903 4700 Fax: 49 221 903 2938 E-mail: asigwart@ford.com	Mr. J. Westphäling Tel: 49 89 32950 722 Fax: 49 89 32950 720 E-mail: juergen.westphaeling@tuev-sued.de

1/ To be determined
