



**Economic and Social
Council**

Distr.
GENERAL

TRANS/WP.29/GRRF/53
8 April 2003

Original: ENGLISH

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

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

Working Party on Brakes and Running Gear (GRRF)

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

(3 – 7 February 2003)

1. GRRF held its fifty-third session from 3 (afternoon) to 7 February 2003 under the Chairmanship of Mr. G. Harvey (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; Serbia and Montenegro ^{*/}; Slovakia; Spain; Sweden; 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); 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 (BIPAVÉR); 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.

^{*/} As of 4 February 2003, the Federal Republic of Yugoslavia changed its name to Serbia and Montenegro.

ELECTION OF OFFICERS

3. As decided at the fifty-second session (TRANS/WP.29/GRRF/52, para. 52), the session started with the election of the GRRF Chairperson for the year 2003. Mr. Geoffrey Harvey from the United Kingdom was unanimously elected Chairman for the two GRRF sessions scheduled for 2003. Mr. Harvey thanked the experts for having elected him and offered them his full collaboration.

REGULATIONS Nos. 13 and 13-H (Braking)

(a) Further development

Documentation: TRANS/WP.29/2003/3; TRANS/WP.29/GRRF/2003/8; TRANS/WP.29/GRRF/2003/9; TRANS/WP.29/GRRF/2003/11; informal documents Nos. 6, 18 and 25 of annex 1 to this report.

4. The expert from Germany introduced the proposal to apply the prescriptions of annex 10 of Regulation No. 13 (TRANS/WP.29/GRRF/2003/8) to vehicles of category O2. The expert from Denmark expressed his opposition to the proposal, because small trailers became unstable if the front axle locks, especially on split mud surfaces or when braking in a corner. He offered to co-operate with the German expert in preparing a revised proposal for the next session. GRRF agreed that the prescriptions of paragraph 1.1. of annex 10 would only apply to vehicles of categories M, N and O2, because O3 and O4 vehicles should be equipped with an anti-lock braking system. Finally, GRRF concluded to resume consideration of the proposal on the basis of an updated proposal to be transmitted by Denmark and Germany.

5. Document TRANS/WP.29/GRRF/2003/9 was introduced by the expert from Germany to clarify that a back-up power supply for the anti-lock braking system/electrically controlled braking system (ABS/EBS) was permitted. The experts from Denmark and France raised the point that with a back-up system there would be no indication to the driver that a fault had occurred. The experts from France and Germany were requested to work together to produce a revised document to eliminate the concerns raised by some experts.

6. With regard to the spring brake control systems (TRANS/WP.29/GRRF/51, annex 2), the expert from the Russian Federation introduced TRANS/WP.29/GRRF/2003/11 with explanatory diagrams. On the same subject, the expert from CLEPA informed the experts that, if a vehicle used a system in accordance with either diagram A or B in the Russian proposal, it would still be required to comply with the stated requirements. He tabled informal document No. 25 with a proposal that solved the concerns. The CLEPA proposal was deemed to be acceptable, but the expert from the Russian Federation requested more time for its consideration. The expert from CLEPA volunteered to consolidate all the documents related to this issue, including an amendment proposed by the expert from the United Kingdom, and to transmit it to the secretariat for distribution with an official symbol for the GRRF October 2003 session.

7. Concerning the proposal to be considered by WP.29 and AC.1 at their March 2003 sessions (TRANS/WP.29/2003/3), GRRF noted that the new ISO standard 11992 had not yet been adopted by ISO. Consequently, it was agreed to recommend to WP.29 and AC.1 not to adopt it and to wait for the adoption of ISO 11992. The Chairman announced his intention to report to AC.2 on the decision taken.

8. The expert from CLEPA introduced informal document No. 6 to permit the operation of trailer brakes in response to the evaluation of on-board generated information. Currently, trailer brakes may be applied to maintain trailer stability following analysis of data from the towing vehicle. To allow a better consideration of the proposal, the secretariat was requested to distribute it with an official symbol at the next session.

9. Following the suggestion made during the one-hundred-and-twenty-seventh session of WP.29 (TRANS/WP.29/861, para. 132), the expert from OICA introduced informal document No. 18 proposing the deletion of the approval marking in Regulations Nos. 13, 13-H, 64, and 79. He announced that similar proposals had been transmitted to GRSP and GRPE. The experts from Denmark, Hungary and Spain expressed their opinion that the current markings were quite useful and requested that a quick decision should not be taken. The expert from the United Kingdom recommended considering the proposal Regulation by Regulation and stated that Regulations Nos. 55 and 78 should keep the marking. He also mentioned that, for European Union Member States, this suppression should not generate a major problem for M1 vehicles, because of the existence of the European Whole Vehicle type-approval. He was not sure what the consequences would be for other categories of vehicles and for the countries not belonging to the European Union. The expert from Japan requested more time to consider the proposal. GRRF agreed to continue consideration of this issue at the next session bearing in mind the conclusions of the other Working Parties, to which similar proposals were transmitted, and the WP.29 recommendation.

(b) Modular type approval for trailers

10. The expert from the European Commission said that no new information was available concerning the procedure for single vehicle approval for trailers as they were still waiting for amendments to the Framework Directive. He said that, for the alignment of the European Community Directive 98/12/EC to Regulation No. 13, a consolidation of the Regulation would be needed. He stated that if a consolidated version of Regulation No. 13 was not forthcoming from the UN he might have to produce an unofficial version himself. He offered to begin the work on this issue in collaboration with the secretariat and other experts.

(c) Facilitation of testing of vehicles in service

Documentation: TRANS/WP.29/GRRF/51, annex 3; informal document No. 12 of annex 1 to this report.

11. GRRF noted that informal document No. 12 superseded TRANS/WP.29/GRRF/51, annex 3. Following discussions, the reference to the removal of wheels was deleted. Concerning how the information regarding wear should be made available, the expert from the United Kingdom stated that it would be more convenient if the minimum disc thickness and maximum drum diameter could be permanently marked on the component, a practice that was commonly used for replacement components. The expert from CLEPA confirmed that all the components which they manufactured were so marked. The expert from OICA agreed to investigate the situation and report back to the next session whether this was the case with all original equipment parts. The proposal, as reproduced in annex 2 to this report, was adopted. It was also agreed to transmit it to WP.29 and AC.1, for consideration at their June 2003 sessions, as an additional part to the draft Supplement 8 to the 09 series of amendments to Regulation No. 13.

(d) Illumination of stop lamps

Documentation: TRANS/WP.29/GRE/2003/7; informal documents Nos. 10 and 11 of annex 1 to this report.

12. The Secretary of GRE attended this part of the meeting to observe the discussions. The expert from the United Kingdom introduced his proposal for illumination of the stop lamps (TRANS/WP.29/GRE/2003/7), and the expert from OICA introduced an alternative proposal (informal document No. 10) as well as a proposal to amend Regulation No. 48 (informal document No. 11). GRRF agreed that, through document TRANS/WP.29/GRE/2003/7, the word “illumination” should replace the word “activation” and also the word “shall” should replace the word “must”. GRRF agreed in principle with the proposal tabled by OICA for paragraphs 5.2.1.30., 5.2.1.30.1., 5.2.1.30.3., 5.2.1.30.5., 5.2.1.30.6., 5.2.2.21, and 5.2.2.21.1. An agreement on the illumination of stop lamps by the operation of the control of the endurance brake and during selective braking was not reached. The expert from the United Kingdom offered to prepare a revised proposal on the basis of the agreements reached and requested the collaboration of the experts.

13. The Chairman expressed his hope to reach an agreement at the October 2003 session, and announced his intention to report to WP.29 and to the Chairman of GRE on the progress made.

(e) Braking compatibility of heavy goods vehicles

Documentation: TRANS/WP.29/GRRF/2003/3; TRANS/WP.29/GRRF/2003/4; TRANS/WP.29/GRRF/2003/5; informal documents Nos. 4, 5, and 8 of annex 1 to this report.

14. The expert from the United Kingdom reported to GRRF about the two meetings on tractor-trailer braking compatibility of heavy commercial vehicles (informal document No. 8). The expert from OICA clarified that his estimate that fifty per cent of vehicles could fail a practical test should only apply to vehicles during type approval due to their design being close to the limit of the compatibility corridor. He further explained that this was being caused by the tolerances allowed.

15. GRRF considered and adopted the proposals transmitted by the informal group (TRANS/WP.29/GRRF/2003/3, TRANS/WP.29/GRRF/2003/4, and TRANS/WP.29/GRRF/2003/5). GRRF adopted in principle the proposals of informal documents Nos. 4 and 5 as reproduced in annex 3 to this report. GRRF agreed that the above-mentioned proposals would not be reconsidered at its next October session, with the exception of the pressure value of 1.2 bar mentioned in paragraph 1.3.1. of annex 10 to Regulation No. 13, which was still in square brackets. The expert from OICA agreed to either verify this figure or provide a suitable alternative. It was also agreed to define, during that session, the needed transitional provisions that the expert from CLEPA should transmit for the adopted proposals.

16. Following the request by the expert from CLEPA, made at the previous session (TRANS/WP.29/GRRF/52, para. 16), the experts from France, Hungary and the United Kingdom informed GRRF that, in their countries, the use of the ISO 7638 connector was mandatory for all vehicles where the connector was fitted. The expert from CLEPA informed GRRF that many vehicles still had an independent service-braking connection for the trailers and emphasized that such a connection was forbidden.

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

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

17. The expert from Japan explained to GRRF that his country was not in a position to be the technical sponsor for the gtr on passenger vehicle brakes nor to propose a Chairman for the informal group. As announced at the previous session (TRANS/WP.29/GRRF/52, para. 17), he introduced a proposal of strategy to establish a draft gtr for braking systems of passenger cars (informal document No.15) and a proposal for the harmonization of regenerative braking systems between Regulation No. 13-H and FMVSS 135 (informal document No. 16).

18. The expert suggested to work on the basis of a small group to make the preparatory technical work previous to the formal constitution of the informal group requested by WP.29 when establishing the priorities for gtrs. He offered to host this meeting on 9 and 10 October 2003 after the GRRF meeting. GRRF thanked the expert for his offer and agreed that the small group should define the main issues to be addressed for the elaboration of the gtr.

REGULATION No. 78 (Motorcycle braking)

Harmonization of motorcycle braking requirements

Documentation: Informal documents Nos. 1 and 26 of annex 1 to this report.

19. The expert from Canada informed GRRF about the meeting for the development on the global technical regulation (gtr) on motorcycle brake systems held in Canada on 25 October 2002. He said that the main points of the meeting were explained in informal document No. 1. He informed GRRF that, according to the guidelines regarding proposing and developing of global technical regulations (TRANS/WP.29/882), his country would submit to AC.3 a proposal for the development of the gtr and, after the agreement of GRRF, it would submit a draft gtr for consideration to AC.3. The expert from the United States of America hoped that there would be another informal meeting to discuss the way forward once all the test results were available. He informed GRRF that his country would need to consider the report before it was sent to AC.3.

20. The expert from IMMA recalled all the presentations he had made at the previous sessions. He introduced informal document No. 26 that summarized all the work made by IMMA on the harmonization of motorcycle braking and suggested to consider it as a background reference document.

REGULATION No. 90 (Replacement brake linings)

(a) Further development

Documentation: TRANS/WP.29/GRRF/2001/18; TRANS/WP.29/GRRF/2003/6.

21. GRRF agreed to defer the consideration of TRANS/WP.29/GRRF/2001/18 to the next GRRF session.

22. The expert from the Russian Federation introduced the proposal for making equivalent the

inertia dynamometric test to the road test (TRANS/WP.29/GRRF/2003/6). He suggested that, before considering the proposal in detail, FEMFM should inform GRRF about the principles of the proposal. Some GRRF experts raised concerns about the equivalence between the current road test of the Regulation and the bench test proposed, but they also agreed that the current situation on type-approving catalogues of replacement braking linings without testing all of them was far from the ideal situation. Experts from Denmark and Spain expressed concern that the removal of vehicle testing would result in brake distribution problems or brake imbalance when replacement components were subsequently fitted. The expert from the United Kingdom suggested that perhaps dynamometer testing, on its own, could be acceptable if the vehicle manufacturer provided robust data at the time of type approval.

23. GRRF decided to request the consent of WP.29 for creating an informal group in charge of amending Regulation No. 90, having a mandate to consider the experience gained since the application of the Regulations and to identify the amendments to the Regulation to be proposed.

REGULATION No. 111 (Handling and stability of vehicles)

Documentation: TRANS/WP.29/GRRF/2000/19; TRANS/WP.29/GRRF/2002/27; informal documents Nos. 14 and 19 of annex 1 to this report.

24. The expert from the Netherlands confirmed to the secretariat that document TRANS/WP.29/GRRF/2000/19 could be withdrawn. The secretariat withdrew informal document No. 14 because its proposal was integrated in informal document No. 19.

25. The expert from the Russian Federation presented informal document No. 19, which superseded document TRANS/WP.29/GRRF/2002/27. He explained to GRRF that the document contained two proposals. The first one referred to the value for the tilt angle and the second one referred to the introduction of vehicle roll angle prescriptions as an indicator of the dynamic behaviour of the vehicle.

26. GRRF experts agreed in principle with the first part of the proposal, but considered that the second part needed further in-depth consideration. The expert from the Russian Federation was asked to produce a consolidated version of the documents to be considered at the next GRRF session. The Russian Federation vigorously urged delegates to further consider, with their own experts, information already given in previous papers as to the desirability of introducing roll angle provisions.

27. GRSP generally discussed the issue of stability enhancement systems and it was agreed that these systems should not be used to improve badly designed vehicles and that a minimum failure level should be prescribed. The Chairman concluded that there appeared to be support for the future introduction of provisions for enhancement systems.

REGULATION No. 79 (Steering equipment)

Documentation: TRANS/WP.29/GRRF/2002/5/Rev.1; TRANS/WP.29/GRRF/2002/23; TRANS/WP.29/GRRF/2002/24 and Add.1; informal documents Nos. 17, 18, 23, and 24 of annex 1 to this report.

28. The expert from Germany introduced TRANS/WP.29/GRRF/2002/5/Rev.1, which included the proposals of TRANS/WP.29/GRRF/2002/23. The expert from Japan introduced informal

document No. 17, which contained an explanation about the differences between the automatically commanded steering and corrective steering. He also introduced informal document No. 23 proposing amendments to TRANS/WP.29/GRRF/2002/5/Rev.1 to introduce the concept of "Lane Departure Avoidance" systems. The expert from the United Kingdom tabled informal document No. 24 consolidating the proposals of informal document No. 23 with further minor amendments.

29. The expert from the Russian Federation made general comments to the proposal, particularly concerning what he saw as a lack of objective provisions, for example, vehicle handling and performance requirements similar to ISO test procedures and announced the transmission of a document with concrete proposals for consideration at the next session.

30. The expert from Germany clarified that the proposal was a first step in the development of electronic steering systems and that, at the end of the process, it could be possible to have steering systems without a steering column. The Chairman recalled that the main amendments in the revised proposal had been introduced in order to avoid, at this stage, the autonomous steering configuration and that at all times the driver should be in control of the steering of the vehicle. The expert from OICA expressed his disappointment for the reconsideration of the basic questions that had been agreed before and had been in the existing Regulation No.79 for many years. He said that the new steering systems were beneficial for road safety and urged GRRF to adopt the proposal, because the new systems developed by the vehicle manufacturers were ready and they were not covered by the current version of Regulation No. 79. He kindly requested the experts to submit their possible comments far enough in advance of the October 2003 session, in order to facilitate their consideration.

31. The expert from Germany signalled that the possibility of having a national approval for automatically commanded steering systems (para. 5.2.6. of the proposal) operating at speeds as high as 50km/h could represent a major problem in the adoption of this amendment to the Regulation. There was discussion whether the limit should be 50km/h or 30km/h with the experts from France, the Netherlands, the Russian Federation and the United Kingdom supporting 50km/h but it was agreed that Germany could carefully consider this issue and fix its position at the next session.

32. GRRF considered in detail TRANS/WP.29/GRRF/2002/5/Rev.1 jointly with informal document No. 24, and agreed the amendments reproduced in annex 4 to this report.

33. The following questions still remained open for the next session:

Paragraph 5.2.6., to be redrafted by the expert from CLEPA, taking into consideration that the limit of 50 km/h was generally supported.

Paragraphs 5.6. to 5.6.2., the expert from Spain, speaking as a participant in CITA, commented on the proposals but it was agreed that these were simple statements and were as far as a type approval authority could go in checking the suitability of a vehicle for future periodic technical inspection.

34. The Chairman insisted that, in relation with this proposal, only the open questions and the document to be transmitted by the Russian Federation (see para. 29 above) would be considered at the October 2003 session. GRRF also agreed to consider at its October 2003 session documents TRANS/WP.29/GRRF/2002/24 and Add.1.

TYRES

(a) Global harmonization of tyre regulations

Documentation: TRANS/WP.29/GRRF/2003/1; informal document No. 21 of annex 1 to this report.

35. The expert from the United States of America informed GRRF on the situation of the rulemaking process on the revision and updating of tyre standards FMVSS 109 and 119 and in relation to improved tyre information on tyre labelling, inflation levels and load limits, and on tyre pressure warning (informal document No. 21).

36. GRRF noted that the outcome of the work of the informal group had been transmitted as draft harmonized provisions concerning pneumatic tyres (TRANS/WP.29/GRRF/2003/1) as agreed at the fifty-second session (TRANS/WP.29/GRRF/52, para. 32). The expert from the United Kingdom, who chaired the informal group, reminded GRRF that the work on global harmonization was stopped following the Congress of the United States' demand to urgently amend the FMVSSs on tyres. The expert from the United States of America said that, when the updating of the FMVSSs were completed, the work on tyre harmonization could possibly re-start. Following the suggestion of the Chairman, GRRF decided not include this issue in the agenda of the next meeting and confirmed that global harmonization of tyre regulations was not included in the programme of work of the 1998 Agreement.

37. The expert from the European Commission informed GRRF that the European Union had issued a study on the influence of tyres in accidents to motor vehicles and motorcycles. He suggested that experts contact him to obtain more details and also offered to provide the secretariat with the web address of the study. The item would remain on the agenda but only to follow the results of the European Union study.

(b) Tyre adhesion test

38. The expert from the United Kingdom informed GRRF about the last meeting held in Brussels in January 2003. He referred to the work of the ISO Group and said that two alternative test methods were under consideration: the test on a vehicle and the test on a trailer. The draft Regulation would be transmitted to GRRF for the final decision for both tests or only of one of them. He said that in Regulations Nos. 30 and 54, each tyre dimension represented a new type, while in the tyre noise proposal tyres were grouped in families. The question of defining a "type" had to be considered for tyre grip. He said that further requirements or different Regulations could pose an additional problem for the approval marking of the tyres. He presented several solutions for the marking and requested the experts to send him their opinions before the next meeting of the informal group scheduled for 6 and 7 May 2003. The expert from Japan considered that only one test method should be presented in the UNECE Regulation. The expert from ETRTO expressed his preference for having separate markings for the various tyre characteristics, for example, the basic provisions, noise and grip. The expert from Germany questioned whether further Regulations were necessary and the expert from OICA agreed that there should not be unnecessary Regulations.

(c) Regulation No. 30 (Pneumatic tyres)

Documentation: TRANS/WP.29/GRRF/2002/11; TRANS/WP.29/GRRF/2002/15/Rev.1; TRANS/WP.29/GRRF/2003/10; informal documents Nos. 3 and 22 of annex 1 to this report.

39. GRRF rejected the proposal by ETRTO to accept a temporary marking of “ZR” tyres (TRANS/WP.29/GRRF/2002/11) but it was agreed by the majority of delegates that discussions did not appear to be giving any solution to this issue and that it should be dropped from the agenda.

40. GRRF adopted TRANS/WP.29/GRRF/2002/15/Rev.1 with the amendments reproduced below. It was agreed to transmit it to WP.29 and AC.1, as draft supplement 13 to the 02 series of amendments to Regulation No. 30, for consideration at their June 2003 sessions.

Paragraph 3.1.10., amend to read:

“3.1.10. In the case of tyres approved after the entry into force of Supplement 13 to the 03 series of amendments to Regulation No. 30 the identification referred to in paragraph 2.17.1.5. shall be placed immediately after the rim diameter marking referred to in paragraph 2.17.1.3.”

41. In relation to paragraph 3. of annex 3 of the above adopted proposal, and at the request of the expert from ETRTO, the secretariat confirmed that the prescriptions of any supplement to the UNECE Regulations only apply to the new types approved after the entry into force of that supplement.

42. The expert from ETRTO introduced a proposal to align the definition for run flat tyres and run flat tyre systems (informal document No. 3) with proposals for Regulation No. 64. The expert from the United Kingdom commented that the definitions were acceptable with small changes which were further agreed by that expert. He also commented that the addition of a marking symbol for run flat was necessary but that performance requirements must also form a part of Regulation No.30. The expert from ETRTO offered to complete the proposal and to submit a new proposal on performance requirements once ISO finished its work.

43. The expert from the Russian Federation introduced informal document No. 22 complementing TRANS/WP.29/GRSG/2003/10 regarding manufacturers’ information on the tyre rolling resistance coefficient. The secretariat was requested to distribute it with an official symbol for the October 2003 session. The Chairman requested the experts to consider the proposal in order to give, at the next session, their opinion on whether this proposal should or should not be incorporated into the Regulation, and whether limit values should be established or not.

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

Documentation: TRANS/WP.29/2003/5; TRANS/WP.29/GRRF/2003/2; TRANS/WP.29/GRRF/2003/10; informal documents Nos. 9 and 22 of annex 1 to this report.

44. GRRF confirmed that the proposal of TRANS/WP.29/2003/5 corresponded to the adopted proposals at its fifty-second session (TRANS/WP.29/GRRF/52, para. 38 and annex 3) and recommended to WP.29 and AC.1 to delete the square brackets of paragraph 3.1.11.

45. In relation to paragraph 3. of annex 3 of the above adopted proposal, and at the request of the expert from ETRTO, the secretariat confirmed that the prescriptions of any supplement to the UNECE Regulations only apply to the new types approved after the entry into force of that supplement.

46. The expert from the United Kingdom introduced TRANS/WP.29/GRRF/2003/2 to solve the issue of upgrading of the service description of carcasses needed for the retreading industry (TRANS/WP.29/GRRF/52, para. 49). The expert from ETRTO rejected that this issue should be incorporated into Regulation No. 54 and tabled an alternative proposal (informal document No. 9). He made it clear that any modification in the load-capacity index or the speed category of a new tyre implied a new type of pneumatic tyre (see para 2.1. of the Regulation). GRRF clarified that granting an extension on the type approval for tyres following its upgrading to a higher load-capacity index or higher speed category was in conflict with the tyre Regulations, and that each change in load-capacity index or speed category should result in a new type-approval. It was agreed that the proposal should be retained in Regulation No.54 but, in the light of the discussions, the expert from the United Kingdom offered to submit an updated proposal for the next GRRF session.

47. GRRF noted that TRANS/WP.29/GRRF/2003/10 and informal document No. 22 had been considered under Regulation No. 30 (see para. 42 above).

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

Documentation: TRANS/WP.29/GRRF/2002/17/Rev.1; informal documents Nos. 2, 13 and 18 of annex 1 to this report.

48. The expert from the United Kingdom introduced TRANS/WP.29/GRRF/2002/17/Rev.1, which incorporated the comments of informal document No. 2. The expert from OICA proposed to change the label requirements and to harmonize the warning lamp colour with FMVSS tyre pressure monitoring requirements (informal document No. 13). Both OICA proposals, with small changes proposed by the expert from the United Kingdom were accepted by GRRF.

49. The expert from ETRTO stated that a run-flat system tyre inflated at the normal pressure was a normal tyre, and that this should be considered when defining such a tyre. The expert from the United States of America suggested to take the definition from FMVSS 138 and stated that the tyre pressure monitoring system detects under-inflation and warns the driver through a tell tale. The expert from Japan requested the introduction of a definition of the tyre pressure monitoring system and its performances. The expert from OICA suggested the deletion of paragraph 5.1.5. of the proposal. The expert from the United Kingdom offered to prepare a revised proposal taking into consideration the comments expressed by the experts, including suggestions for modification to the definitions proposed by the expert from ETRTO, which were discussed and agreed by this expert.

50. The results of the proposal for the suppression of the type approval marking in vehicles (informal document No. 18) are indicated in paragraph 9 of this report.

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

Documentation: TRANS/WP.29/GRRF/2002/18/Rev.1.

51. GRRF considered the proposal of document TRANS/WP.29/GRRF/2002/18/Rev.1. The expert from the United Kingdom suggested amending the word “approved” to “manufactured” in paragraph 3.2.9. and agreed to consider the reason for the date given. GRRF agree to continue consideration of this proposal at its next session.

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

Documentation: TRANS/WP.29/GRRF/2002/19/Rev.1; TRANS/WP.29/GRRF/2002/21.

52. As per Regulation No. 108 (see para. 49 above), GRRF agreed to consider an amended version of document TRANS/WP.29/GRRF/2002/19/Rev.1 at the next session.

53. Concerning the retreading of non “e” or “E” marked tyres (TRANS/WP.29/GRRF/2002/21), GRRF noted that the positions stated by several experts at the two previous sessions remained (TRANS/WP.29/GRRF/52, para. 47 and TRANS/WP.29/GRRF/51, para. 60). To solve the deadlock, the Chairman announced his intention to report on this issue to WP.29, in order to obtain a general guidance on the principle if Regulations under the 1958 Agreement could accept systems and/or components conforming to other standards.

(h) Tyre pressure monitoring systems (TPMS)

Documentation: Informal document No. 20 of annex 1 to this report.

54. The expert from Japan made a presentation on tyre pressure monitoring systems (informal document No. 20). He explained to GRRF the differences between the direct and indirect systems with regard to their different detection techniques, accuracy, reliability, cost and convenience. He gave examples of both systems and their future developments. He summarized his presentation indicating that both direct and indirect systems were able to contribute to increasing vehicle safety with regard to tyre deflation, and that the higher cost of the direct tyre pressure monitoring system would become lower in future and that, for indirect systems, progress in their performance would be made by developing TPMS and tyres in combination. He offered to post his presentation in the GRRF web page as informal document No. 20a. GRRF experts congratulated the expert from Japan for his excellent presentation and explanation of the tyre pressure monitoring systems.

OTHER BUSINESS

55. The expert from Germany reminded GRRF experts that the Complex Electronic Systems (CES) were covered in Regulation No. 13 and in the draft amendment to Regulation No. 79, but that in both cases the prescriptions only covered special aspects of brakes and steering systems respectively. He said that, in his opinion, new test procedures were needed to cover safety matters related to complex electronic systems that could affect other safety areas of vehicles. He requested the advice of GRRF about the idea of presenting a new draft Regulation covering the general interaction of CES with other parts of vehicles.

56. The Chairman said that a similar proposal had been made several years ago and that GRRF had decided, with regard to Regulation No. 13, to elaborate a new annex to it, which could be used as a general guidance of CES for other Regulations. The expert from Japan raised his concerns about the scope of the proposed new Regulation. The expert from France said that difficulties could be found in dealing with two Regulations for one item if the specific annexes related to CES would be removed for the specific Regulations and its prescriptions placed in a general Regulation. The expert from the Netherlands indicated that electromagnetic compatibility (Regulation No. 10) presented the same situation.

57. It was generally accepted by GRRF that such a question should be transmitted to WP.29 for general advice, but that before doing that, GRRF agreed to continue consideration of this issue as an independent agenda item at the next session, and requested the expert from Germany to transmit a document reflecting the main ideas of his proposal.

TRIBUTE TO MR. G. BURFORD, MR. W. MÄDER and MR. P. G. MALINVERNI

58. The Chairman informed GRRF that Mr. G. Burford would no longer attend the GRRF sessions due to his approaching retirement. Mr. Harvey thanked Mr. Burford for his high contribution to the GRRF's work and, in particular, to the United Kingdom delegation's work. GRRF joined the Chairman's thanks to Mr. Burford and wished him a long, merited and happy retirement.

59. Mr. H. Hesse, head of the German delegation, announced the retirement of Mr. H. W. Mäder, the German expert who was chairing the informal group on steering systems. GRRF thanked Mr. Mäder for his contribution for the inclusion of the new steering systems into Regulation No. 79 and for his high-level technical work. It also wished him a long, merited and happy retirement. GRRF acknowledged that Mr. U. Schneider would take over the chairmanship of the informal group on steering systems.

60. The expert from ETRTO, Mr. P.G. Malinverni, also announced his retirement after some twenty years' attendance at GRRF. The Chairman stated that GRRF would certainly miss Mr. Malinverni's expertise. GRRF thanked him for his high contribution on tyre issues with appreciative applause and wished him a long and happy retirement.

AGENDA FOR THE NEXT SESSION

61. The following agenda was agreed for the fifty-fourth session of GRRF to be held in Geneva, from 6 (9.30h) to 8 (17.30h) October 2003 1/:

1. Regulations Nos. 13 and 13-H (Braking)
 - 1.1. Further development
 - 1.2. Facilitation of testing of vehicles in-service
 - 1.3. Illumination of stop lamps
 - 1.4. Braking Compatibility of heavy goods vehicles

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. Tyre adhesion test
 - 6.2. Regulation No. 30 (Pneumatic tyres)
 - 6.3. Regulation No. 54 (Pneumatic tyres for commercial vehicles)
 - 6.4. Regulation No. 64 (Temporary use spare wheels/tyres)
 - 6.5. Regulation No. 108 (Retreaded pneumatic tyres)
 - 6.6. Regulation No. 109 (Retreaded pneumatic tyres for commercial vehicles)
 - 6.7. Influence of tyres in accidents to motor vehicles and motorcycles
7. Complex electronic systems
8. Election of officers
9. Other business

^{1/} As part of the secretariat's efforts to reduce expenditure, all the official as well as the informal 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.

Annex 1LIST OF INFORMAL DOCUMENTS DISTRIBUTED WITHOUT A SYMBOL
DURING THE SESSION

No.	Transmitted By	Agenda item	Language	Title
1.	Canada	2.	E	Informal Meeting on the Development of the Global Technical Regulation (gtr) on Motorcycle Brake systems
2.	ETRTO	6.5.	E	Draft Amendment to Regulation No. 64
3.	ETRTO	6.3.	E	UN/ECE Regulation 30 Passenger Car Tyres, Run Flat System Tyre
4.	United Kingdom	1.5.	E	Proposal to amend UNECE Regulation 13 (Braking)
5.	United Kingdom	1.5.	E	Proposal to amend UNECE Regulation 13 (Braking)
6.	CLEPA	1.1.	E	Proposal for draft amendments to Regulation No. 13
7.	United Kingdom	7.	E	Provisional agenda item running order
8.	United Kingdom	1.5.	E	HGV compatibility ad hoc working group meeting report to GRRF
9.	ETRTO	6.4.	E	Doc. TRANS/WP.29/GRRF/2003/2 (Draft proposal to amend regulation ECE 54)
10.	OICA	1.4.	E	OICA proposal for amendments to UNECE R 13 regarding the illumination of the stop lamps based on document TRANS/WP.29/GRRF/2003/7
11.	OICA	1.4.	E	Proposed amendments to ECE Regulation No. 48
12.	OICA	1.3.	E	OICA/CLEPA proposed amendments to Regulation No. 13 (Inspection of vehicle service brakes)

No.	Transmitted By	Agenda item	Language	Title
13.	OICA	6.5.	E	Proposal for a draft amendment to document TRANS/WP.29/GRRF/2002/17/Rev.1
14.	Secretariat	4.	E	Proposal for draft Corrigendum 1 to Regulation No. 111
15.	Japan	1.6.	E	Proposal of strategy to establish a draft gtr for braking systems of passenger cars
16.	Japan	1.6.	E	Proposal for the harmonization of regenerative braking systems between ECE R13H and FMVSS135
17.	Japan	5.	E	Typical example of automatically commanded and corrective steering
18.	OICA	8.1.	E	OICA draft proposal for collective amendments to Regulation Nos. 13, 13-H, 64 and 79
19.	Russian Federation	4.	E/R	Proposal for revision of the document TRANS/WP.29/2002/27 with regard to the Regulation No. 111
20. and 20a	Japan	6.5.	E	Tire pressure monitoring system
21.	USA	6.1.	E	Status of tire rulemaking actions
22.	Russian Federation	6.4.	R/E	Introduction of additions to the Regulations Nos. 30 and 54 regarding manufacturer's information on rolling resistance coefficient
23.	Japan	5.	E	Proposed amendments to document TRANS/WP.29/GRRF/2002/5/Rev.1
24.	United Kingdom	5.	E	Proposal from the United Kingdom to clarify the draft Regulation No. 79

No.	Transmitted By	Agenda item	Language	Title
25.	CLEPA	1.1.	E	Draft amendments to Regulation No. 13
26.	IMMA	2.	E	Global harmonization of PTW and 3-wheeler braking.
--	CLEPA	1.5.	E	Tractor/trailer braking compatibility

Annex 2AMENDMENTS TO REGULATION No. 13 BASED ON INFORMAL DOCUMENT No. 12
ADOPTED BY GRRF AT ITS FIFTY-THIRD SESSION

Paragraphs 5.1.4. and 5.1.4.1., amend 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 5.2.1.11.2 and 5.2.2.8.2. of this Regulation."

Paragraph 5.2.1.11.2., amend to read:

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

Insert new paragraphs 5.2.1.11.2.1. and 5.2.1.11.2.2., to read:

"5.2.1.11.2.1. It shall be possible to easily check this wear on service brake linings from the outside or underside of the vehicle utilizing only the tools or equipment normally supplied with the vehicle, for instance by the provision of appropriate inspection holes or by some other means. Alternatively, acoustic or optical devices warning 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 components, 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 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."

Paragraph 5.2.2.8.2., amend to read:

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

Insert new paragraphs 5.2.2.8.2.1. and 5.2.2.8.2.2., to read:

5.2.2.8.2.1. It shall be possible to easily check this wear on service brake linings from the outside or underside of the vehicle utilizing only the tools or equipment normally supplied with the vehicle, for instance, by the provision of appropriate inspection holes or by some other means.

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 components, 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 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 3

AMENDMENTS TO REGULATION No. 13 BASED ON INFORMAL DOCUMENTS Nos. 4
AND 5 ADOPTED IN PRINCIPLE BY GRRF AT ITS FIFTY-THIRD SESSION

Paragraph 2.15., delete the reference to footnote 1/ and the corresponding footnote.

Paragraph 2.15.2.2., delete the reference to footnote 2/ and the corresponding footnote.

Through the Regulation, the references to footnotes 3/ to 9/ and their corresponding footnotes,
renumber as footnotes 1/ to 7/.

Annex 10,

Add a new paragraph 1.1.1., to read:

"1.1.1. Where a vehicle is installed with an endurance braking system the retarding force produced by that system shall not be taken into consideration when determining the vehicle performance with respect to the provisions of this annex."

Add new paragraphs 1.3. to 1.3.1.1., to read:

"1.3. Validation of the development of braking force.

1.3.1. At the time of type approval it shall be checked that the development of braking on an axle of each independent axle group */ shall be within the following pressure ranges:

(a) Laden vehicles:

At least one axle shall commence to develop a braking force when the pressure at the coupling head is within the pressure range 0.2 to 1.0 bar.

At least one axle of any other axle group shall commence to develop a braking force when the pressure at the coupling head is at a pressure \leq **[1.2 bar]**.

(b) Unladen vehicles:

At least one axle shall commence to develop a braking force when the pressure at the coupling head is within the pressure range 0.2 to 1.0 bar.

*/ An axle group is where a number of axles have a maximum axle spread of 2 m.

1.3.1.1. With the wheel(s) of the axle(s) raised off the ground and free to rotate, apply an increasing brake demand and measure the coupling head pressure corresponding to when the wheel(s) can no longer be rotated by hand. This condition is defined as the development of the braking force."

Paragraph 7.5., amend to read:

"7.5. Electronically controlled brake force distribution systems that cannot fulfil the requirements of paragraphs 7.1., 7.2., 7.3. and 7.4. above shall have a self-checking procedure of the functions which influence brake force distribution. In addition, when the vehicle is stationary, it must be possible to carry out the checks defined in paragraph 1.3.1. above by generating the nominal demand pressure value associated with the commencement of braking for both the laden and the unladen conditions."

Paragraph 8., amend to read:

"8. Vehicle testing

At the time of type approval the technical service shall verify conformity with the requirements contained within this annex and carry out any further tests considered necessary to this end. The results of on any further tests shall be recorded and appended to the type approval report."

Annex 13.

Add a new paragraph 4.6., to read:

"4.6. Vehicles equipped with an integrated endurance braking system must also be equipped with an anti-lock braking system acting at least on the service brakes of the endurance braking system's controlled axle and on the endurance braking system itself, and shall fulfil the relevant requirements of this annex."

Annex 4AMENDMENTS TO DOCUMENT TRANS/WP.29/GRRF/2002/5/Rev.1
ADOPTED BY GRRF AT ITS FIFTY-THIRD SESSION

Paragraph 0., subparagraph b), amend to read:

- "b) by allowing the approval of systems where the driver remains at all times in primary control of the vehicle, but may be helped by the steering system being influenced by signals initiated on board the vehicle. These systems are defined as "Advanced Driver Assistance Steering Systems" (ADASS) and may incorporate an "Automatically Commanded Steering Function", for example, using passive infrastructure devices to assist the driver in keeping the vehicle on an ideal path (Lane Guidance, Lane Keeping or Heading Control), to assist the driver in manoeuvring the vehicle at low speed in confined spaces or to assist the driver in coming to rest at a pre-defined point (Bus Stop Guidance). ~~Alternatively they~~ Advanced Driver Assistance Steering Systems may also incorporate a "Corrective Steering Function" that, for example, warns the driver of any deviation from ~~the chosen lane~~ an ideal path (Lane Departure Warning), ~~corrects the steering angle to prevent departure from the chosen lane (Lane Departure Avoidance)~~ or corrects the steering angle of one or more wheels to improve the ~~vehicle's~~ dynamic behaviour or stability. ~~of the vehicle to assist in maintaining the desired line.~~

In the case of both an Automatically Commanded Steering Function and the driver warning aspect of a Corrective Steering Function, the driver can at all times choose to override or ignore the function.

Direct positive steering of trailers "

Reinsert old paragraph 1.4., to read:

- "1.4. Automatically commanded steering systems may only be approved for use in traffic situations below a maximum speed of 50 km/h or for manoeuvring or parking operations."

Paragraphs 1.4. and 1.5. (former), renumber as paragraphs 1.5. and 1.6.

Paragraph 2.3.4., amend to read:

" of the vehicle. It comprises one of the following functions:"

Paragraph 2.3.4.1., amend to read:

" on board vehicle to generate continuous control action in order to"

Paragraph 2.3.4.2., amend to read:

- "2.3.4.2. "Corrective steering function" means the discontinuous control function within a complex electronic control system whereby, for a limited duration changes to the steering angle of one or more wheels may result from automatic evaluation of signals initiated on board the vehicle in order to maintain the basic desired path of the vehicle or to influence the vehicle dynamic behaviour."
-

Annex 5

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	<u>1/</u> Tel:(+44-20) 7944-2072 Fax:(+44-20) 7944-2069 E-mail:
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. U. Schneider Tel: (+ 49 7031) 647 32 Fax: (+ 49 7031) 647 59 E-mail: ulrich.schneider@tuev-sued.de	<u>1/</u> Tel: Fax: E-mail:

1/ To be determined