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-NINTH SESSION

(30 January – 3 February 2006)

1. GRRF held its fifty-ninth session from 30 January - 3 February 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; Italy; Japan; Netherlands; Norway; People's Republic of China; Republic of Korea; Republic of South Africa; Russian Federation; Slovakia; Spain; Sweden; Turkey; United Kingdom; and United States of America. Representatives 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); Federation of European Motorcyclists Association (FEMA); Speciality Market Equipment Association (SEMA). Upon the special invitation of the Chairman, experts from the following non-governmental organizations participated: Bureau International Permanent des Associations de Vendeurs et rechapeurs de pneu (BIPAVER), Comité de Liaison des Constructeurs de Carrosseries et Remorques (CLCCR), Federation of European Manufacturers of Friction Materials (FEMFM).

2. The informal documents distributed during the session are listed in Annex 1 to this report.
1. REGULATIONS Nos. 13 AND 13-H (Braking)

1.1. Further development


3. Following GRRF's decision at its previous session (TRANS/WP.29/GRRF/58, para. 3) to remove category M1 vehicles from the scope of Regulation No. 13 and to extend the scope of Regulation No. 13-H to category N1 vehicles, the expert from the United Kingdom introduced a proposal for amendments to Regulation No. 13 (ECE/TRANS/WP.29/GRRF/2006/7). He added that these amendments were already inserted into a new consolidated version of Regulation No. 13 (ECE/TRANS/WP.29/GRRF/2006/8). GRRF welcomed both documents and agreed that the consolidated document should be considered as draft 11 series of amendments. The expert from OICA proposed an amendment to the scope and the insertion of transitional provisions (GRRF-59-22). The expert from Japan introduced TRANS/WP.29/GRRF/2005/7/Amend.1 proposing amendments to the transitional provisions of Regulation No. 13. As no common position could be found, GRRF agreed to hold a final review of ECE/TRANS/WP.29/GRRF/2006/8 at its next session in September 2006.

4. Regarding the necessary amendments to Regulation No. 13-H, the expert from OICA recalled the purpose of TRANS/WP.29/GRRF/2005/7, part A, and introduced a proposal to extend the scope of the Regulation to vehicles of category N1 (GRRF-59-05). GRRF agreed in principle on the proposal, but noted that some provisions regarding the periodical technical inspection (PTI) were still missing in the Regulation. The expert from Germany volunteered to submit, in due time, a new proposal for consideration at the next GRRF session. It was agreed to adopt the necessary amendments to Regulation No. 13-H together with the above mentioned draft 11 series of amendments to Regulation No. 13.

5. Recalling his proposal on a revised test procedure for the determination of the energy consumption requirements with respect to the procedure defined within Annex 19 to Regulation No. 13, the expert from CLEPA introduced documents ECE/TRANS/WP.29/GRRF/2006/5 and ECE/TRANS/WP.29/GRRF/2006/6, superseding TRANS/WP.29/GRRF/2005/12. Following the discussion, GRRF agreed on the need to align Annex 13 to the new Annex 19 and invited the experts from France, Germany and CLEPA to prepare a common proposal. The expert from France agreed with the proposal on air suspension systems. However, he stated that the provisions should not be opened for all other possible suspensions. GRRF adopted ECE/TRANS/WP.29/GRRF/2006/5 and ECE/TRANS/WP.29/GRRF/2006/6, unamended, and requested the secretariat to submit them, as draft Supplement 2 to the 10 series of amendments to Regulation No. 13, to WP.29 and AC.1 for consideration at their June 2006 sessions.

6. GRRF considered a proposal by CLEPA (ECE/TRANS/WP.29/GRRF/2004/19/Rev.2) to make mandatory the category A anti-lock braking systems for vehicles of category O4. GRRF only adopted the amendment to paragraph 5.2.2.13. and requested the secretariat to submit it as a part (see
para. 5 above) of draft Supplement 2 to the 10 series of amendments to Regulation No. 13, to WP.29 and AC.1 for consideration at their June 2006 sessions.

7. The expert from the Russian Federation gave a presentation on a research study in his country regarding the activation of brake lighting in case of application of the vehicle auxiliary brakes (GRRF-59-16 and Add.1). The expert from Japan introduced GRRF-59-11 regarding performance requirements of endurance braking systems. Referring to the discussion of GRE on limiting the time of stop light display activated by the retarder (see report TRANS/WP.29/GRE/55, para. 15), the expert from Germany suggested to add a specification for the activation of the stop lamps during a maximum of 4 seconds. The expert from CLEPA recalled the purpose of GRRF-57-34 and requested to limit those performance requirements of endurance braking only to vehicles equipped with electric control transmission. GRRF agreed to resume consideration of this subject at its next session on the basis of a common proposal by Japan, Germany, CLEPA and OICA. The Chairman reminded GRRF that WP.29 had agreed that stop lamp signal duration was a matter for GRE and, therefore, he did not expect the proposal to include specifications in this respect.

8. The expert from Germany introduced ECE/TRANS/WP.29/GRRF/2006/3 regarding special requirements for the electric transmission of parking brake systems. GRRF noted a study reservation by the Netherlands and agreed to resume its consideration at the next GRRF session.

9. The expert from CLEPA recalled the discussion at the previous GRRF session on TRANS/WP.29/GRRF/2005/13 proposing amendments to Regulation No. 13 in the light of experience in applying the current test method. He added that he had received only a few comments. The expert from Germany underlined the importance of the document. GRRF experts were invited to send their comments to the expert from CLEPA. GRRF agreed to resume consideration of this subject at its next session on the basis of a new proposal jointly prepared by France, Germany and CLEPA.

10. GRRF followed with interest a presentation by the expert from Denmark on the results of a survey study in his country regarding the braking behaviour of heavy motor vehicles and their trailers in real traffic (GRRF-59-07). GRRF agreed to resume consideration of this subject at its next session and, for that purpose, requested the secretariat to distribute GRRF-58-25 with an official symbol (see ECE/TRANS/WP.29/GRRF/2006/10).

1.2. Facilitation of testing of vehicles in service


11. Regarding Periodical Technical Inspection (PTI) and wear indicators on service brake linings, the expert from Germany introduced GRRF-59-06 proposing further amendments to document ECE/TRANS/WP.29/GRRF/2004/23/Rev.1. He added that an informal expert meeting was scheduled to be held in Saragossa (Spain), on May 2006. GRRF agreed to defer the consideration of this item to its next session and invited the experts from Denmark, the United Kingdom, CLEPA and OICA to work towards finding an agreed solution before that session.
1.3. Development of a passenger vehicle braking gtr

Documentation: Informal document No. GRRF-59-03 of Annex 1 to this report.

12. GRRF was informed about the progress of work (GRRF-59-03) of the informal group on passenger vehicle gtr on braking (PVGTR). GRRF noted that the Executive Committee (AC.3) to the 1998 Agreement had agreed to suspend temporarily the work of the informal group while solutions were found for the motorcycle ABS tests. It was also explained that some issues appeared to be very difficult to find an agreed solution and so the final draft gtr could include options and, consequently, not be fully harmonized. GRRF agreed to resume its consideration at the next session.

2. MOTORCYCLE BRAKING

2.1. Harmonization of motorcycle braking requirements


13. The expert from Canada introduced ECE/TRANS/WP.29/GRRF/2006/4 regarding the draft gtr on motorcycle brakes developed by the MCGTR informal group. The expert from Germany raised the need that motorcycles with sidecar should have all wheel brakes. The expert from IMMA presented the remaining open issues to be addressed (GRRF-59-04). Following a detailed consideration of ECE/TRANS/WP.29/GRRF/2006/4, GRRF agreed in principle on the solutions proposed by IMMA (as reproduced in GRRF-59-24) including the proposed ABS requirements for the stops on a high friction surface, the stops on a low friction surface and the wheel lock check for low to high surface transition, pending validation testing. GRRF experts were invited to check the draft gtr with respect to the correct use of the terms "actuation", "activation" and "application".

14. A meeting of the MCGTR informal group was held after the GRRF session proper, on Friday afternoon, 3 February 2006, to develop and co-ordinate a test program in order to validate the proposed solutions. Test facilities in Europe, Japan and the United States of America were prepared to participate in that test program.

15. GRRF noted the urgency for the adoption of the draft gtr on motorcycle brakes. The Chairman suggested having a special GRRF session in June or July 2006, subject to confirmation by WP.29 and AC.3, at their March 2006 sessions. The expert from the United States of America reiterated its desire to conclude the gtr with a vote of WP.29 and AC.3 at their June 2006 sessions.

3. REGULATION No. 90 (Replacement brake linings)


16. Referring to the adoption by GRRF of TRANS/WP.29/GRRF/2005/16 at the previous session, the expert from France recalled the purpose of TRANS/WP.29/GRRF/2005/17. He informed GRRF that the next meeting of the informal group on replacement brake linings was scheduled to be held in Paris on June 2006. He reported on the ongoing study in his country on the sensibility regarding the bedding of brake linings on brake performance. GRRF agreed to postpone the adoption of the document to the next GRRF session, awaiting the final results of the study.
4. REGULATION No. 79 (Steering equipment)


17. The expert from the Russian Federation recalled the purpose of GRRF-58-15 and introduced GRRF-59-15 proposing the further development of Regulation No. 79 regarding new provisions for vehicle steering control, handling and stability. GRRF welcomed the proposal, but underlined its general position to avoid, in UNECE Regulations, test requirements based on subjective evaluations. The expert from the Russian Federation withdrew TRANS/WP.29/GRRF/2005/4 and volunteered to prepare a new proposal for consideration by GRRF at its sixty-first session in February 2007. Concluding the discussion, the Chairman suggested removing the item from the agenda and resuming consideration of this subject on the basis of a new proposal by the Russian Federation.

5. TYRES

5.1. Harmonization of tyre Regulations

18. GRRF noted that no new document was tabled. However, a detailed status report on the development of a gtr on tyres was presented by the expert from ETRTO. He informed GRRF that, at the present time, no further meetings of the informal group were scheduled, and that, in the meantime, ETRTO would continue to work on harmonized test methods for tyres. He stated that the draft gtr could be structured in different modules, according to the different requirements for safety performance, tyre rolling sound and wet grip. He added that France, as sponsor of the gtr, would prepare a draft proposal to develop a gtr on tyres, for consideration by AC.3 at its June 2006 session. After adoption by AC.3 of this proposal, the informal group would start its work.

19. Referring to GRRF-58-18, the Chairman concluded that, nevertheless, other modular approaches were still possible. GRRF agreed to resume consideration of this subject at its next session in the light of further developments in WP.29 and AC.3.

5.2. Tyre adhesion test


20. With regard to the inclusion of wet grip requirements into Regulation No. 117, the expert from the United Kingdom introduced the revised ECE/TRANS/WP.29/GRRF/2005/11/Rev.1 superseding GRRF-56-13, GRRF-58-26 and GRRF-58-29. He suggested inserting some additional amendments (GRRF-59-02 and GRRF-59-17) in order to align that proposal with the decision of WP.29 during its November 2005 session (see report TRANS/WP.29/1047, paras. 32 and 36) to allow approvals either for noise or for noise and wet grip only. The expert from ETRTO did not feel that the decision of WP.29 correctly reflected the view of GRB at its forty-second session. He questioned the mandatory application by a Contracting Party of the requirements for rolling sound where wet grip requirements were applied. He preferred to keep a fully flexible approach and to have optional requirements for rolling sound or wet grip or both, subject to the decision of the
Contracting Party. The Chairman noted ETRTO's comments, but did not agree to revisit WP.29's direction on this matter.

21. Following the discussion, GRRF considered at length a revised proposal (GRRF-59-19, tabled by the United Kingdom). With regard to the provisions for the conformity of production, the expert from ETRTO opposed the deletion of paragraph 8.3. proposing tolerances for possible mass production variations and variability. He added that, in the case of deletion, the administrative departments of the Contracting Parties should be aware to use the same test facility and the same test procedure for type approval purposes and the conformity of production.

22. GRRF adopted the document as reproduced in Annex 5 to this report (see ECE/TRANS/WP.29/GRRF/59/Add.1). The secretariat was requested to submit the adopted text to GRB (see GRB-43-1), for endorsement at its forty-third session in February 2006, and, thereafter, to transmit the document to WP.29 and AC.1, for consideration at their June 2006 sessions, as draft 01 series of amendments to Regulation No. 117.

5.3. Regulation No. 30 (Pneumatic tyres)


23. Recalling its decision of the previous session (TRANS/WP.29/GRRF/58, paras. 31 and 32), GRRF agreed to defer consideration on this subject to its sixtieth session in September 2006, awaiting the final results of the studies by ETRTO and the European Commission in the field of tyre rolling resistance.

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


24. GRRF resumed consideration of the proposal by the United Kingdom to simplify and clarify in Regulation No. 64 the existing requirements for vehicles fitted with run-flat tyres (ECE/TRANS/WP.29/GRRF/2002/17/Rev.5). The expert from Germany raised a scrutiny reservation on the purpose of the document. The EC expert stated that both systems, the run flat tyre and the tyre pressure monitoring system (TPMS), have a potential to increase road safety. He added that, at the present time, there was no intention by the European Commission to mandate one of these systems, due to the absence of a strong justification. GRRF also noted a proposal by Japan regarding amendments to this issue (GRRF-59-10).

25. Following the discussion, the expert from the United Kingdom presented a revised document (GRRF-59-20). The proposal received some comments. The expert from ETRTO could not agree with the prescriptions of the test requirements for run-flat warning systems and referred to the justification of GRRF-57-21. Concluding the discussion, the Chairman thanked the expert from the United Kingdom for his perseverance on this matter and, recognising that agreement on the technical detail was close, invited him to prepare a revised proposal for final consideration at the next session.
5.5. **Regulation No. 106 (Pneumatic tyres for agricultural vehicles)**

**Documentation:** ECE/TRANS/WP.29/GRRF/2005/15/Rev.1; Informal document No. GRRF-59-18 of Annex 1 to this report.

26. The expert from ETRTO introduced GRRF-59-18 justifying the insertion into Regulation No. 106 of new categories of agriculture tyres for radial tyres operating at very high deflection. GRRF considered the ETRTO proposal (ECE/TRANS/WP.29/GRRF/2005/15/Rev.1) in detail and adopted it without amendment. The secretariat was requested to submit the document to WP.29 and AC.1, for consideration at their June 2006 sessions, as draft Supplement 4 to Regulation No. 106.

5.6. **Noise emissions of retreaded tyres**

**Documentation:** Informal documents Nos. GRRF-59-08 and GRRF-59-14 of Annex 1 to this report.

27. The expert from BIPAVER informed GRRF that the consideration of the new requirements for rolling sound emission of retreaded tyres was still in progress within GRB.

28. The expert from ETRTO introduced GRRF-59-08 proposing an increase of the tolerances for the section width of retreaded tyres. GRRF noted a general support of the document and requested the secretariat to distribute it with an official symbol for final consideration at the next GRRF session (see ECE/TRANS/WP.29/GRRF/2006/11).

29. The expert from BIPAVER presented a proposal to define tyres with kerb bands for retreaded tyres and their inclusion into Regulation No. 109 (GRRF-59-14). GRRF noted some comments and agreed to resume consideration of this subject at its next session in September 2006 on the basis of new official document by the EC and BIPAVER.

5.8. **Exchange of information on national and international tyre requirements**

30. The expert from the EC informed GRRF that the European Community would not be in the position to vote, at the March 2006 sessions of WP.29 and AC.1, on the new draft Regulation on the approval of wheels for passenger vehicles.

31. GRRF noted the information by ETRTO that India was applying its own regulations for braking and tyres in line with UNECE Regulations Nos. 13, 30 and 54. However, India was requesting their national sidewall markings for tyres. GRRF would like to receive some detailed information from India on this subject at the next session in September 2006.

6. **OTHER BUSINESS**

6.1. **Electronically controlled stability enhancement systems**

**Documentation:** Informal document No. GRRF-59-21 of Annex 1 to this report.

32. On behalf of the Chairman of the informal group on Electronic Vehicle Stability Control (EVSC), the expert from Hungary presented the progress of work made by the informal group during the three last sessions (GRRF-59-21). GRRF noted that the EVSC informal group was well
represented by braking experts for heavy good vehicles. The expert from OICA encouraged the experts on passenger vehicle braking to join the informal group. Concluding the discussion, the GRRF Chairman suggested that the informal group should focus on heavy-duty vehicles and continue to work on a concrete proposal for amendments to Regulation No. 13, taking into account the possible later extension to passenger vehicles. GRRF agreed to resume consideration at its next session.

6.2. Clarification of the scope of Regulations covered by GRRF


33. The EC expert recalled the discussion at the previous GRRF session on TRANS/WP.29/GRRF/2005/19 regarding amendments to the scopes of Regulations Nos. 30, 54, 75, 78, 90, 108 and 109. The expert from Germany suggested further amendments to the tyre Regulations Nos. 30, 54, 108 and 109 (GRRF-59-12).

34. Regarding the amendments to the scope of Regulation No. 90, the expert from OICA presented a clarification (GRRF-59-09). GRRF adopted those amendments, as reproduced in Annex 2 to this report and requested the secretariat to submit the adopted text to WP.29 and AC.1, for consideration at their June 2006 sessions, as draft Supplement 8 to the 01 series of amendments to Regulation No. 90.

35. GRRF noted that specific test requirements for vehicles of categories L_6 and L_7 were still missing in Regulations Nos. 13 and 78. As no common agreement could be reached on this subject, the Chairman announced his intention to seek the advice of WP.29 whether vehicles of categories L_6 and L_7 should be included into the scope of Regulations Nos. 13 or 78. GRRF agreed to resume consideration at its next session on the basis of a revised proposal by the EC taking into account the advice by WP.29.

6.3. Regulation No. 89 (Speed limitation devices)

36. No new information was received on this subject. GRRF agreed to remove this item from the agenda.

6.4. Exchange of information on national and international requirements on passive safety

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

6.5. Regulation No. 48 (Installation of lighting and light-signalling devices)


38. GRRF noted a new proposal ECE/TRANS/WP.29/GRE/2006/31 (superseding TRANS/WP.29/GRE/2005/2) intended to be approved by GRE at its April 2006 session. The expert from OICA reported on the progress of work of the joint GRE/GRRF expert meetings. He
39. GRRF adopted ECE/TRANS/WP.29/GRRF/2006/2 with the amendments as reproduced in Annex 3 to this report. The secretariat was requested to submit the text as draft Supplement 2 (separately to that mentioned in paras. 5 and 6 above) to the 10 series of amendments to Regulation No. 13, to WP.29 and AC.1 for consideration at their June 2006 sessions.

6.6. Regulation No. 55 (Mechanical couplings)


40. Recalling the purpose of GRRF-58-5, the expert from Germany gave a presentation on a new test procedure for coupling balls and towing brackets. GRRF welcomed that initiative and agreed with the Chairman's suggestion to establish a new informal group on mechanical couplings. The Chairman announced his intention to seek WP.29's consent, at the March 2006 session, to establish the new informal group.

41. GRRF invited the expert from Germany to prepare a proposal regarding the terms of reference and the rules of procedure for the new informal group. It was agreed to resume consideration of this subject at its next session.

AGENDA FOR THE NEXT SESSION

42. GRRF did not consider the agenda for the sixtieth session to be held in Geneva, from 18 (14.30 h) to 21 (12.30 h) September 2006. It was agreed that the Chairman, jointly with the secretariat, would propose a draft agenda. 1/ 2/.

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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. For the above-mentioned official documents, delegates can now also access the Optical Document System (ODS) of the United Nations at the website address: http://documents.un.org.

2/ To help delegates make arrangements for travel and accommodation, the Chairman advises delegates that tyre items will be discussed at the end of the session.
## Annex 1

**LIST OF INFORMAL DOCUMENTS DISTRIBUTED WITHOUT A SYMBOL**  
**DURING THE FIFTY-NINTH SESSION (GRRF-59-…..)**

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**Reconsideration of informal documents from the previous sessions of GRRF**

(referring to agenda item and follow-up decision of the current session)

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<td>Proposal for draft amendments to Regulation No. 13</td>
<td>(b)</td>
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<td>5.2</td>
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<td>E</td>
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</table>

**Notes:**
(a) Consideration completed or superseded
(b) Continue consideration at the next session with official symbol
Annex 2

Amendments to Regulation No. 90 (Replacement brake lining assemblies)
(adopted by GRRF at its fifty-ninth session, see para. 34)

Paragraphs 1. to 1.2., amend to read:

"1. SCOPE

1.1. This Regulation applies to:

1.1.1. Replacement brake lining assemblies intended for use in friction brakes forming part of a braking system of vehicles of category M, N, L and O which have a type approval in accordance with Regulations Nos. 13, 13-H or 78.

1.1.2. Replacement drum brake linings designed to be riveted to a brake shoe for fitment to and use on vehicles of category M3, N2, N3, O3 or O4 having a type approval in accordance with Regulation No. 13."

Amendments to Regulation No. 13 (Braking)
(adopted by GRRF at its fifty-ninth session, see para. 39)

Insert new paragraphs 2.32. and 2.33., to read:

"2.32. **Braking signal**: logic signal indicating brake activation as specified in paragraph 5.2.1.30.

2.33. **Emergency braking signal**: logic signal indicating emergency braking as specified in paragraph 5.2.1.31."

Paragraph 5.2.1.30., amend to read:

"5.2.1.30. Generation of a braking signal to illuminate stop lamps."

Insert new paragraphs 5.2.1.31. to 5.2.1.31.2.(b), to read:

"5.2.1.31. When a vehicle is equipped with the means to indicate emergency braking, activation and de-activation of the emergency braking signal shall meet the specifications below:

5.2.1.31.1. The signal shall be activated by the application of the service braking system as follows:

<table>
<thead>
<tr>
<th></th>
<th>Shall not be activated below</th>
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<tbody>
<tr>
<td>M1 and N1</td>
<td>6 m/s²</td>
</tr>
<tr>
<td>M2, M3, N2 and N3</td>
<td>4 m/s²</td>
</tr>
</tbody>
</table>

The signal shall be de-activated for all vehicles at the latest when the deceleration has fallen below 2.5 m/s².

5.2.1.31.2. The following conditions may also be used:
(a) The signal may be activated by the application of the service braking system in such a manner that it would produce, in an unladen condition and engine disconnected, under the test conditions of Type-0 as described in Annex 4, a deceleration as follows:

<table>
<thead>
<tr>
<th></th>
<th>Shall not be activated below</th>
</tr>
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<tbody>
<tr>
<td>M1 and N1</td>
<td>6 m/s²</td>
</tr>
<tr>
<td>M2, M3, N2 and N3</td>
<td>4 m/s²</td>
</tr>
</tbody>
</table>

The signal shall be de-activated for all vehicles at the latest when the deceleration has fallen below 2.5 m/s².

or,
(b) The signal may be activated when the service braking system is applied at a speed above 50 km/h and the antilock system is fully cycling (as defined in paragraph 2. of Annex 13)

The signal shall be deactivated when the antilock system is no longer fully cycling."
### Annex 4

**GRRF INFORMAL GROUPS**

<table>
<thead>
<tr>
<th>Informal group on</th>
<th>Chairperson</th>
<th>Secretary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Passenger vehicle braking gtr (PVGTR)</strong></td>
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</tr>
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</tr>
<tr>
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<td>1/</td>
</tr>
<tr>
<td><strong>Replacement Discs and Drums (RD&amp;D)</strong></td>
<td>Mr. W. Gaupp Tel: (+49-201) 825-4139 Fax: (+49-201) 825-4185 E-mail: <a href="mailto:wgaupp@tuev-nord.de">wgaupp@tuev-nord.de</a></td>
<td>1/</td>
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<tr>
<td><strong>Electronic Vehicle Stability Control (EVSC)</strong></td>
<td>Mr. L. Palkovics (c/o: Mr. G. Brett) Tel: (+36-1) 371-5950 Fax: (+36-1) 203-1167 E-mail: <a href="mailto:brett@tuvnord.hu">brett@tuvnord.hu</a></td>
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