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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-FOURTH SESSION

(6 – 8 October 2003)

1. GRRF held its fifty-fourth session from 6 to 8 October 2003 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): Canada; Czech Republic; Denmark; Finland; France; Germany; Hungary; India; Italy; Japan; Netherlands; Norway; Poland; Republic of Korea; Russian Federation; Slovakia; Spain; Sweden; Thailand; 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); 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.

ELECTION OF OFFICERS

3. The session started with the election of the GRRF Chairperson for the session and for the year 2004. On the proposal by the expert from France, Mr. Ian Yarnold from the United Kingdom was unanimously elected GRRF Chairman. Mr. Yarnold appreciated the confidence of GRRF and thanked the group for his election.

REGULATIONS Nos. 13 AND 13-H (BRAKING)

(a) Further development

Documentation: TRANS/WP.29/GRRF/2003/8; TRANS/WP.29/GRRF/2003/9; TRANS/WP.29/GRRF/2003/11; TRANS/WP.29/GRRF/2003/18; TRANS/WP.29/GRRF/2003/21; TRANS/WP.29/GRRF/2003/22; TRANS/WP.29/GRRF/2003/23; TRANS/WP.29/GRRF/2003/26; informal document No. 2 of annex 1 to this report.

4. At the request of the expert from Denmark, GRRF postponed the discussion of document TRANS/WP.29/GRRF/2003/8 to its next session. The expert from Denmark offered to prepare a revised version of the document on which the discussion could be based.

5. The expert from Germany presented informal document No. 2 which superseded document TRANS/WP.29/GRRF/2003/9. In order to allow a better consideration of the proposal, the secretariat was requested to distribute it with an official symbol at the fifty-fifth session,

6. Regarding the spring brake control systems, document TRANS/WP.29/GRRF/2003/26, including also the proposals of document TRANS/WP.29/GRRF/2003/11, was adopted with the deletion of the word "inadvertent" in the proposal for annex 8, para. 3.3.(b) of Regulation No. 13. The secretariat was requested to transmit the proposal to WP.29 and AC.1 for consideration at their March 2004 sessions as draft Supplement 9 to the 09 series of amendments to Regulation No. 13, including the amendments adopted at the fifty-first session (TRANS/WP.29/GRRF/51, annex 2).

7. Document TRANS/WP.29/GRRF/2003/18 was also adopted. It was agreed to transmit the proposal to WP.29 and AC.1 for consideration at their March 2004 sessions as an additional part of draft Supplement 9 to the 09 series of amendments to Regulation No. 13.

8. Document TRANS/WP.29/GRRF/2003/21 was adopted. GRRF agreed to transmit the proposal to WP.29 and AC.1 for consideration at their March 2004 sessions as draft Corrigendum 1 to Supplement 7 to the 09 series of amendments to Regulation No. 13.

9. GRRF considered and adopted documents TRANS/WP.29/GRRF/2003/22 for Regulation No. 13-H and TRANS/WP.29/GRRF/2003/23 for Regulation No. 13. The Secretary confirmed that paragraph 5.2.18.1.1. was not present in the official version of Regulation 13-H. The adoption of document TRANS/WP.29/GRRF/2003/22 would reinstate the paragraph. For document TRANS/WP.29/GRRF/2003/23 in annex 18, paragraph 2.6. the word "etc." was deleted and the sentence closed after the word "optical". The following additional amendments were also adopted to Regulation No. 13, annex 18, paragraph 3.3.3. and to Regulation No. 13-H, annex 8, paragraph 3.3.3. respectively:

Paragraph 3.3.3., amend to read:

"... electrical transmission links, by an optical-fibre diagram for optical links, by a piping diagram ..."

10. The secretariat was requested to transmit the above-mentioned proposals, as amended, to WP.29 and AC.1 for consideration at their March 2004 sessions as draft Corrigendum 3 to Supplement 6 to the 09 series of amendments to Regulation No.13 and as draft Corrigendum 1 to Supplement 2 to Regulation No. 13-H.

11. GRRF adopted a proposal to be included in draft Corrigendum 3 to Supplement 6 to the 09 series of amendments to Regulation No. 13 as reproduced below. It was agreed to transmit the Corrigendum to WP.29 and AC.1 for consideration at their March 2004 sessions.

Annex 12,

Paragraph 2.4.9.1., the formula, correct to read:

$$" M = \rho_r'(p_r - p_{or}) "$$

Annex 12, appendix 4, paragraph 5.6.1.2., the formula, correct to read:

$$" p^* / p_{max}' = \dots\dots\dots " "$$

(b) Facilitation of testing of vehicles in service

Documentation: TRANS/WP.29/2003/95.

12. GRRF noted that the proposals on transitional provisions to be included in Regulation No. 13, adopted at its fifty-third sessions (TRANS/WP.29/2003/95), would be submitted to WP.29 and AC.1, for consideration at their next session in November 2003, as draft Corrigendum1 to Supplement 8 to the 09 series of amendments to Regulation No. 13.

13. GRRF had an exchange of views on the appropriate indication of the permissible minimum brake disk thickness and maximum brake drum diameter, either by marking or by wear indicators. The expert from the United Kingdom announced the transmission of a proposal for the next session. The expert from OICA was requested to communicate the position of the manufacturers on the time limit necessary for the introduction of marking/wear indicators for new vehicles.

(c) Illumination of stop lamps

Documentation: TRANS/WP.29/GRRF/2003/25; informal documents Nos. 11 and 11/Rev.1 of annex 1 to this report.

14. GRRF considered document TRANS/WP.29/2003/25 and informal documents Nos. 11 and 11/Rev.1 proposing amendments to it.

15. Despite a lengthy exchange of views regarding the limit of 2.2 m/s² to generate a signal to illuminate the stop lamps in the case of "endurance braking" and its measurement at a speed of 80 km/h, GRRF could not reach an agreement.

16. Concerning the activation of the service braking system by "automatically commanded

braking", GRRF agreed to continue the consideration of the proposed speed limit of 50 km/h and the deactivation of the signal below 0.7 m/s^2 of retardation at its next session. It was also considered acceptable that the signal would not be requested in the case of "selective braking" and leaving it to the manufacturers to decide when the braking event is considered as "selective" or as "automatically commanded".

17. GRRF agreed to resume the consideration of this issue at its next session. The expert from Japan was requested to revise, in cooperation with the experts from the Netherlands and from the United Kingdom, his proposals and transmit them to GRRF.

(d) 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; TRANS/WP.29/GRRF/2003/29; informal document No. 16 of annex 1 to this report.

18. GRRF confirmed its agreement with 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 also adopted the proposals reproduced in documents TRANS/WP.29/GRRF/2003/29 and TRANS/WP.29/GRRF/53, annex 3. It was also agreed that the adopted proposals needed transitional provisions of around two years, and that the expert from OICA should transmit a text for them in time for the next GRRF session. The expert from Italy raised a separate issue. After a brief discussion, he was requested to revise informal document No.16 and to transmit it to the secretariat in time to be considered at the next GRRF session as an official document.

MOTORCYCLE BRAKING

(a) Harmonization of motorcycle braking requirements

Documentation: Informal document No. 10 of annex 1 to this report.

19. The expert from Canada informed GRRF about the results of the meeting held in Italy, in July 2003, for the development of the global technical regulation (gtr) on motorcycle brake systems, (informal document No.10). GRRF invited its experts to contribute to the work of this informal group and to provide any accidents statistics that might be relevant. The expert from India expressed his intention to attend the next meeting of the group. The expert from IMMA reiterated the interest of his organization in this work and expressed his intention to submit proposals to the informal group. The expert from Canada will keep GRRF informed on the progress in the work of the informal group.

REGULATION No. 90 (Replacement brake linings)

Further development

Documentation: TRANS/WP.29/GRRF/2001/18; TRANS/WP.29/GRRF/2003/6; informal documents Nos. 5 and 6 of annex 1 to this report.

20. Following the consent of WP.29, GRRF decided to mandate an informal group to consider the updating of Regulation No.90 in the light of the experience gained since its application. The expert from FEMFM accepted to chair the group. The group will establish its terms of reference and submit them for approval to GRRF. The experts from the Czech Republic, Germany, France, the Netherlands and the United Kingdom announced their intention to participate in its work. CLEPA will inform the Chairman of the group about the possibility of their participation and assuming the secretariat. Taking into account the contribution already made by the expert from the Russian Federation, GRRF considered that the participation of the expert from the Russian Federation in the work of the informal group would be highly desirable.

21. The informal group was requested to consider, among other things, the documents already transmitted and submit to GRRF a consolidated document for discussion at the next session. The main subjects to be examined by the informal group should be:

- the capacity of the existing measuring equipment,
- the test speed and
- the testing material.

REGULATION No. 111 (Handling and stability of vehicles)

Documentation: TRANS/WP.29/GRRF/2003/14; TRANS/WP.29/GRRF/2003/15; informal document No. 12 of annex 1 to this report.

22. The expert from the Russian Federation presented document TRANS/WP.29/GRRF/2003/14, containing proposals to the tilt angle in the tilt test. The expert from Japan presented informal document No. 12, with comments to the Russian proposal. In spite of a long discussion, the Russian proposal did not obtain a general approval of GRRF. One of the main objections was that a tank fully filled with water for the test would put the vehicle in overload condition. Finally, it was decided to continue the discussion at the next session. The expert from the United Kingdom will communicate his proposals for the test to the expert from the Russian Federation, permitting him to adapt consequently the proposal and submit a revised document for the next session. The expert from OICA will present the problems encountered by the manufacturers in the definition of the centre of gravity of vehicles. Experts from countries applying Regulation No.111 were requested to inform GRRF on their experience in the application of it.

23. The proposal of the expert from the Russian Federation to include into the Regulation specifications on roll angle (TRANS/WP.29/GRRF/2003/15) did not receive any support and was deleted from the GRRF agenda.

REGULATION No. 79 (Steering equipment)

Documentation: TRANS/WP.29/GRRF/2002/5/Rev.1; TRANS/WP.29/GRRF/2002/24 and Add.1; TRANS/WP.29/GRRF/2003/19; informal documents Nos. 3, 9, 18, 19, and 21 of annex 1 to this report.

24. GRRF had an exchange of views on the comments received on document TRANS/WP.29/GRRF/2002/5/Rev.1.

25. The expert from Germany introduced informal document No. 21 and stated that the competent authorities of his country could not agree with "automatically commanded steering" or with the possibility of a national approval of "autonomous steering systems".

26. The expert from the Russian Federation was of the opinion (informal document No. 19) that a method for the evaluation of the influence of electronic steering systems on the vehicle's active and passive safety should be established.

27. The expert from CLEPA introduced document TRANS/WP.29/GRRF/2003/19 and informal document No. 9.

28. The expert from OICA insisted on the urgent necessity of appropriate requirements on "automatically commanded steering" already developed by the manufacturers but not yet covered by Regulation No.79.

29. The expert from Germany agreed to take into account the comments made during the session (see paras. 25-28 above) and to revise document TRANS/WP.29/GRRF/2002/5/Rev.1 for its consideration at the February 2004 session.

30. The proposed amendments to the test procedure and to the steering effort evaluation (TRANS/WP.29/GRRF/2002/24 and Add.1 and informal document No.3) did not receive any support and GRRF agreed not to continue consideration of the documents.

31. GRRF followed with interest the introduction of informal document No. 18 by the expert from the Russian Federation. He was requested to extend his proposals to passenger cars and submit it to GRRF as an official document for consideration at the next session.

TYRES

Documentation: Informal documents No. 13 of annex 1 to this report.

32. GRRF noted with thanks the information provided by the expert from the United States of America on the state of rule making procedures in his country (informal document No. 13). On the request of the expert from ETRTO concerning motorcycle tyres, the expert from the United States of America confirmed that a test method already existed and could be used, while the labelling requirements were still in elaboration.

(a) Tyre adhesion test

Documentation : Informal document No. 14 of annex 1 to this report.

33. The expert from the United Kingdom introduced Informal document No. 14 proposing amendments to Regulation No. 30 in order to incorporate in it requirements on wet grip for passenger cars. He explained that the document was intended to update GRRF on progress in the informal group and that a revised document is expected to be prepared for the next session. A general discussion followed which focused upon tyre marking, family of tyre types, the procedure for type approval and the prescriptions on the conformity of production. There was no agreement on these issues but GRRF offered general support that the new proposals should be considered as a new series of amendments to the Regulation. Concerning the the use of a trailer or a vehicle for the tests, GRRF did not reach an agreement. The informal group was requested to prepare an updated document to be considered at the next session of GRRF.

(b) Regulation No. 30 (Pneumatic tyres)

Documentation: TRANS/WP.29/GRRF/2003/10; TRANS/WP.29/GRRF/2003/17;
TRANS/WP.29/GRRF/2003/30 and Corr.1; informal document No. 20 of annex 1 to this report.

34. GRRF had a general exchange of views on the proposal of the expert from the Russian Federation (TRANS/WP.29/GRRF/2003/10, TRANS/WP.29/GRRF/2003/30 and Corr.1 and informal document No. 20) concerning the rolling resistance of pneumatic tyres and a test method for measuring it. The main question raised was the necessity and the benefit of measuring the rolling resistance from the point of view of CO₂ emission reduction. GRRF was of the opinion that, before the consideration of the proposal, the tyre manufacturers should inform GRRF about their work to improve rolling resistance. The discussion will be resumed at the next session.

35. GRRF adopted document TRANS/WP.29/GRRF/2003/17 and agreed to transmit it to WP.29 and AC.1 for consideration at their March 2004 sessions as draft Corrigendum 1 to Supplement 10 to the 02 series of amendments to Regulation No. 30.

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

Documentation: TRANS/WP.29/GRRF/2003/2/Rev.1; TRANS/WP.29/GRRF/2003/10;
TRANS/WP.29/GRRF/2003/30 and Corr.1; informal document No. 15 of annex 1 to this report.

36. GRRF considered and adopted the amendments proposed to Regulations Nos. 54 and 109 (TRANS/WP.29/GRRF/2003/2/Rev.1) with the amendment of paragraph 5.7. in which in the first, second and fifth lines the word "tyre" shall be replaced by "tyre type" and in the third line the deleted words "or different speed symbol" are to be restored. It was agreed to submit the proposal as amended to WP.29 and AC.1 for consideration at their March 2004 sessions as draft Supplement 16 to Regulation No. 54 and as draft Supplement 2 to Regulation No. 109 respectively.

37. The secretariat was requested to distribute informal document No. 15 with an official symbol for consideration at the next session.

38. GRRF noted that the issue of rolling resistance (TRANS/WP.29/GRRF/2003/10; TRANS/WP.29/GRRF/2003/30 and Corr.1) had been addressed under the item concerning Regulation No. 30 (see paragraph 34. above).

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

Documentation: TRANS/WP.29/GRRF/2002/17/Rev.2; informal document No. 2 of the fifty-third session of GRRF.

39. After a short discussion on the requirement proposed for "run flat" and "directional" tyres, GRRF postponed the meaningful discussion of the subject to its next session. The expert from ISO will keep GRRF informed on the progress of the work of his organization in this field.

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

40. Due to lack of time, the consideration of this item was postponed to the next session

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

41. The expert from BIPAVER regretted that WP.29 had decided not to accept non "E" or "e" marked casings into UN ECE regulated retreading processes. He said that Japanese casings had been used with good results for many years to balance shortages in European casing supplies. He also mentioned that the proposals tabled by BIPAVER in document TRANS/WP.29/GRRF/2003/13, would have ensured and demonstrated that a retread produced on such a casing according to Regulation No. 109 would be to the same high standards as a retread built on a casing of European origin. He also expressed the hope that the subject and prospect could be discussed again at some future stage.

42. GRRF requested the secretariat to distribute informal document No. 17 with an official symbol for consideration at the February 2004 session.

(g) Influence of tyres in accidents to motor vehicles and motorcycles

43. Due to lack of time the discussion of this item was postponed to the next session.

(h) Regulation No.106 (Agricultural tyres)

Documentation: TRANS/WP.29/GRRF/2003/24; TRANS/WP.29/GRRF/2003/28; informal document No. 8 of annex 1 to this report.

44. GRRF adopted the proposal of document TRANS/WP.29/GRRF/2003/24 as amended by informal document No. 8 and reproduced in annex 2 to this report. The secretariat was requested to transmit it to WP.29 and AC.1 for consideration at their March 2004 sessions, as Supplement 3 to Regulation No. 106.

45. GRRF adopted document TRANS/WP.29/GRRF/2003/28 and agreed to transmit it to WP.29 and AC.1, for consideration at their March 2004 sessions, as draft Corrigendum 1 to Supplement 2 to Regulation No. 106.

OTHER BUSINESS

(a) Proposal for a new Regulation on complex electronic systems

Documentation: TRANS/WP.29/GRRF/2003/27.

46. The expert from Germany introduced a proposal (TRANS/WP.29/GRRF/2003/27) for a new draft Regulation for assembling in a single Regulation the type approval of all complex electronic systems instead of introducing prescriptions on them in the different Regulations. During a general exchange of views, concerns were expressed on the approval of a part of a vehicle without verifying its influence when incorporated in it. It was also mentioned that complex electronic systems could cover vehicle parts belonging to the competence of other Working Parties and that in such cases a decision of WP.29 would be necessary on how to proceed. GRRF agreed to continue consideration of the proposal at its next session.

(b) Declaration of compliance with a specific (former) version of an ECE Regulation.

Documentation: TRANS/WP.29/2003/44.

47. Concerning this proposal, the expert from the United Kingdom was of the opinion that such declaration could be acceptable if there was no interdiction in the Regulation for approval according to a former version. The expert from Japan expressed doubts in accepting the proposal which would create a double standard for the same subject. The expert from Hungary could accept such a declaration for special vehicles (small series, etc). It was clarified that the aim of the Declaration was to offer the opportunity to countries not being Contracting Parties to the 1958 Agreement to assure a certain level of performance for vehicles to be registered in their countries. GRRF agreed to continue the consideration of the proposal at its next session.

(c) Regulation No. 55 (Coupling devices)

Documentation: Informal document No. 7 of annex 1 to this report.

48. GRRF had an exchange of views on the proposal presented by the expert from ISO (informal document No.7) on wear limits for coupling devices and was of the opinion that the subject should be dealt with in the framework of the 1997 Agreement. Experts were requested to take into consideration the document when dealing with the item of draft Rule No. 2 to this Agreement (see para. 49 below).

(d) Draft Rule No. 2 to be annexed to the 1997 Agreement

Documentation: TRANS/WP.29/2003/16.

49. GRRF requested its experts to give their approval on the proposal or to submit their comments in time before the next session when the discussion will be resumed.

TRIBUTE TO MR. G. HARVEY

50. GRRF thanked Mr. G. Harvey, its expert and former Chairman for his high contribution to the GRRF's work since 1989 and wished him further success in his new tasks.

AGENDA FOR THE NEXT SESSION

51. GRRF did not consider the possible provisional agenda for the fifty-fifth session of GRRF to be held in Geneva, from 3 (9.30h) to 6 (17.30h) February 2004. It was agreed that the Chairman, jointly with the secretariat, would propose a draft agenda. 1/, 2/, 3/.

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.

2/ Due to the new dates adopted at the one-hundred-and-thirty-first WP.29 session, the fifty-fifth session of GRRF will start with the discussion of items related to tyres.

3/ At the request of several experts, the proposal for a draft Regulation on wheels will be included in the draft agenda.

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

No.	Transmitted By	Agenda item	Language	Title
1. and 1/Add.1	Secretariat		E	Proposed meeting running order
2.	ETRTO	1.1.	E	Draft amendment to Regulation No. 13 (Braking)
3.	Poland	5.	E	Draft amendments to Regulation No. 79 (Steering equipment)
4.	European Commission	6.7.	E	Commission study on motor vehicle tyres and related aspects
5.	FEMFM	3.	E	Draft amendments to Regulation No. 90 (Replacement brake linings)
6.	FEMFM	3.	E	Draft amendments to Regulation No. 90 (Replacement brake linings)
7.	ISO	8.3.	E	Proposal on wear limits for mechanical coupling components to be included in Regulation No. 55 (Coupling devices)
8.	ETRTO	6.8.	E	Draft amendments to Regulation No. 106 (Agricultural tyres)
9.	CLEPA	5.	E	Draft amendments to Regulation No. 79 (Steering equipment)
10.	Canada	2.	E	Harmonization of motorcycle braking requirements
11 11/Rev.1	Japan	1.3.	E	Draft amendments to document TRANS/WP.29/GRRF/2003/25
12.	Japan	4.	E	Draft amendments to document TRANS/WP.29/GRRF/2003/15
13.	USA	6.	E	Status of tire rulemaking actions
14.	United Kingdom	6.2.	E	Draft amendments to Regulation No. 30 in order to incorporate requirements for wet grip

No.	Transmitted By	Agenda item	Language	Title
15.	ETRTO	6.3.	E	Draft amendment to Regulation No. 54 (Tyres for commercial vehicles)
16.	Italy	1.4.	E	Proposal for draft amendments to document TRANS/WP.29/GRRF/2003/29
17.	France	6.6.	E	Proposal for draft amendments to Regulation No. 109
18.	Russian Fed.	4.	E	Dynamic lateral stability test procedure
19.	Russian Fed.	5.	E	Draft amendments to Regulation No.79
20.	Russian Fed.	6.2. and 6.3.	E/R	Methods of measuring rolling resistance
21.	Germany	5.	E	Statements on electronic steering

Annex 2

AMENDMENTS ADOPTED TO DOCUMENT TRANS/WP.29/GRRF/2003/24

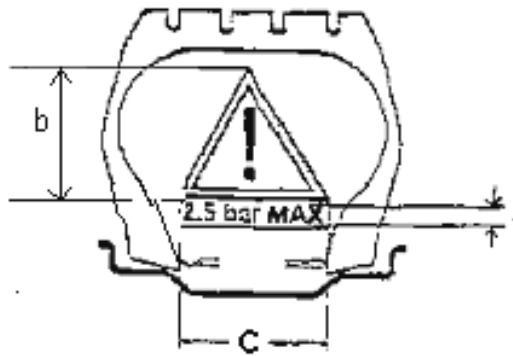
Annex 5, Table 1, Note 1, amend to read:

"...to the Tyre sidewalls: "F – 1" or "F – 2".

Annex 7, part B, text, delete the words " or F-3".

Annex 7, part C, delete the correction proposed to the table.

Annex 11, replace the figure by the following:



Annex 3

AD-HOC INFORMAL GROUPS OF GRRF

<u>Name</u>	<u>Chairman</u>	<u>Contact person</u>
Tyres	Mr. I. Yarnold Tel:(+44-20) 7944-2086 Fax:(+44-20) 7944-2069 E-mail: ian.yarnold@dft.gsi.gov.uk	<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:
Brake linings	Mr.W. Rothmann Tel: (+ 49-2171) 501- 577 Fax: (+ 49-2171) 501- 530 E-mail: wrothmann@tmdfriction.com	<u>1/</u> Tel: Fax: E-mail

1/ To be determined
