



Economic and Social Council

Distr.: General
31 October 2011

Original: English

Economic Commission for Europe

Inland Transport Committee

World Forum for Harmonization of Vehicle Regulations

Working Party on Brakes and Running Gear

Seventy-first session

Geneva, 13–15 September 2011

Report of the Working Party on Brakes and Running Gear on its seventy-first session (13–15 September 2011)

Contents

	<i>Paragraphs</i>	<i>Page</i>
I. Attendance.....	1	3
II. Adoption of the agenda (agenda item 1)	2	3
III. Advanced Emergency Braking Systems (agenda item 2).....	3-9	3
IV. Regulations Nos. 13 and 13-H (Braking) (agenda item 3)	10–25	4
A. Electronic stability control (ESC).....	10–14	4
B. Trailer braking	15–16	5
C. Fully Automated Coupling Systems (FACS).....	17	5
D. Clarifications	18–21	6
E. Braking symbols in Regulation No. 121 (Identification of controls, tell-tales and indicators).....	22–24	6
F. Other business.....	25	7
V. Regulation No. 55 (Mechanical couplings) (agenda item 4).....	26	7
VI. Regulation No. 90 (Replacement brake linings) (agenda item 5).....	27–28	7
VII. Tyres (agenda item 6).....	29–38	8
A. Global technical regulation on tyres	29	8
B. Regulations Nos. 30 and 54 (Pneumatic tyres).....	30–31	8

C.	Regulation No. 106 (Tyres for agricultural vehicles)	32	8
D.	Regulation No. 117 (Tyres - Rolling resistance, rolling noise and wet grip)..	33-38	8
E.	Other business.....	39	9
VIII.	Other business (agenda item 7)		
A.	Tributes	40-41	9
IX.	Election of officers (agenda item 8)	42	9
X.	Provisional agenda for the seventy-second session	43	10

Annexes

I.	List of informal documents considered during the session		11
II.	Adopted amendments to the draft Regulation on Advanced Emergency Braking Systems		14
III.	Draft amendments to Regulation No. 13.....		18
IV.	Draft amendments to Regulation No. 117.....		20
V.	GRRF informal groups.....		25

I. Attendance

1. The Working Party on Brakes and Running Gear (GRRF) held its seventy-first session from 13 to 15 September 2011 in Geneva. The meeting was chaired by Mr. S. Sopp (United Kingdom). Experts from the following countries participated in the work, following Rule 1(a) of the Rules of Procedure of the World Forum for Harmonization of Vehicle Regulations (WP.29) (TRANS/WP.29/690 and TRANS/WP.29/690/Amend.1): Australia, Belgium, Canada, China, Czech Republic, Denmark, Finland, France, Germany, Hungary, India, Italy, Japan, Netherlands, Norway, Poland, Republic of Korea, Russian Federation, Spain, Sweden, Switzerland, United Kingdom of Great Britain and Northern Ireland and United States of America. Experts from the European Commission (EC) also participated. Experts from the following non-governmental organizations participated: European Association of Automobile Suppliers (CLEPA), Federation of European Manufacturers of Friction Materials (FEMFM), International Motorcycle Manufacturers Association (IMMA), International Road Transport Union (IRU), International Organization for Standardization (ISO), and International Organization of Motor Vehicle Manufacturers (OICA). Upon the special invitation of the Chair, experts from the following non-governmental organizations participated: the International Association of the Body and Trailer Building Industry (CLCCR), the European Tyre and Rim Technical Organisation (ETRTO).

II. Adoption of the agenda (agenda item 1)

Documentation: ECE/TRANS/WP.29/GRRF/2011/28,
ECE/TRANS/WP.29/GRRF/2011/28/Add.1
ECE/TRANS/WP.29/GRRF/2011/28/Add.2
Informal document GRRF-71-01

2. GRRF adopted the agenda (ECE/TRANS/WP.29/GRRF/2011/28 and Addenda 1 and 2), as well as the running order GRRF-71-01.

III. Advanced Emergency Braking Systems (agenda item 2)

Documentation: ECE/TRANS/WP.29/2011/92
ECE/TRANS/WP.29/2011/93
ECE/TRANS/WP.29/GRRF/2011/39
Informal documents GRRF-71-16, GRRF-71-23, GRRF-71-24,
GRRF-71-25, GRRF-71-26, GRRF-71-27-Rev.1 and GRRF-71-30-
Rev.2

3. GRRF focused its work on the text in square brackets in ECE/TRANS/WP.29/2011/92 (Step 1– original version of the Regulation on Advanced Emergency Braking Systems) and ECE/TRANS/WP.29/2011/93 (Step 2–01 series of amendments to the Regulation), both on the agenda of the November 2011 session of WP.29: Requirements for vehicles not equipped with pneumatic rear-axle suspension, requirements for N₂ and M₂ vehicles, requirements for vehicles not equipped with pneumatic braking and transitional provisions between step 1 and step 2.

4. The Chair of the informal group on Automatic Emergency Braking and Lane Departure Warning Systems (AEBS/LDWS) reported on the progress made by the informal group from the last GRRF session to the meeting held on 12 September 2011 in conjunction with the proper session of GRRF. He introduced GRRF-71-25 as the outcome

of the discussion of the informal group. In particular, it was proposed to tackle, in the preamble of the Regulation, vehicles not equipped with a pneumatic rear-axle suspension. The expert from OICA proposed in GRRF-71-24 to add in paragraph 5.1. the possibility for an "optional" type-approval for vehicles not equipped with a pneumatic rear-axle suspension. The expert from Germany supported this proposal. The secretariat and the expert from EC were of the opinion that these vehicles were already tackled in the preamble (see above) and that the wording for paragraph 5.1. was confusing because by definition a UNECE Regulation was optional. Furthermore, it was not clear for the secretariat which requirements would apply to these vehicles. GRRF could not reach a final decision on this OICA proposal and agreed to let the World Forum for Harmonization of Vehicle Regulations (WP.29) decide whether an "optional" type-approval in paragraph 5.1. was appropriate for vehicles not equipped with a pneumatic rear-axle suspension.

5. The expert from OICA proposed in GRRF-71-24 replacing ECE/TRANS/WP.29/GRRF/2011/39 to exclude from the scope of the original version of the AEBS Regulation: N₂ vehicles below 8 tons, M₂ vehicles and vehicles not equipped with pneumatic braking. After discussion GRRF supported this proposal.

6. For the 01 series, the expert from OICA proposed in GRRF-71-24 to include all N₂ and M₂ vehicles in the scope of the Regulation. However, for N₂ vehicles below 8 tons and M₂ vehicles, it was proposed to set the limit values in Annex 3 at a later stage (before 1 November 2016), in order to give more time to GRRF to develop special requirements for these vehicles. GRRF supported this proposal but with the alternative wording proposed by the expert from EC in GRRF-71-26. GRRF committed itself to develop these requirements in the proposed timeframe.

7. With regard to the timing of the first warning mode for a moving target for collision avoidance requirements (i.e. cells E1 and E2 of the table in GRRF-70-06), GRRF recalled the preference by the expert from Germany, for 2 seconds specifically for legal reasons. However, since a majority of experts favoured 1.4 second, GRRF proposed to remove the square brackets from 1.4 seconds in the table in Annex 3 of ECE/TRANS/WP.29/2011/92 and ECE/TRANS/WP.29/2011/93. Since the requirements of rows 1 and 2 of ECE/TRANS/ WP.29/2011/92 and ECE/TRANS/WP.29/2011/93 became identical, GRRF agreed to merge the two rows of the table.

8. GRRF considered GRRF-71-16 (OICA) and GRRF-71-23 (EC) amending the transitional provisions of the 01 series of amendments. Since GRRF could not reach a final decision, GRRF requested the secretariat to draft the transitional provisions according to the objectives fixed in GRRF-71-30. After discussion, GRRF adopted GRRF-71-30-Rev.2 as reproduced in Annex II. One paragraph reproducing the text of the 1958 Agreement was left in square brackets for final decision by WP.29 at its November 2011 session.

9. In concluding the discussion, GRRF adopted GRRF-71-27-Rev.1 as reproduced in Annex II and requested the secretariat to submit it to WP.29 and the administrative Committee of the 1958 Agreement (AC.1) as amendments to ECE/TRANS/WP.29/2011/92 and ECE/TRANS/WP.29/2011/93, for consideration at their November 2011 sessions.

IV. Regulations Nos. 13 and 13-H (Braking) (agenda item 3)

A. Electronic stability control (ESC)

Documentation: ECE/TRANS/WP.29/2011/94
ECE/TRANS/WP.29/GRRF/2011/36

Informal documents GRRF-71-03, GRRF-71-08, GRRF-71-15,
GRRF-71-17, GRRF-71-20 and GRRF-71-21

10. The secretariat of the informal group on an Alternative Method to assess the vehicle Electronic Vehicle Stability Control system (AMEVSC) introduced GRRF-71-03 supplementing ECE/TRANS/WP.29/2011/94. The expert from Germany expressed in GRRF-71-21 legal concerns over the general approach of the alternative method to assess ESC as proposed by ECE/TRANS/WP.29/2011/94. The expert from EC was not of this opinion and proposed to discuss this issue at the European level, and if needed, raise the matter at the WP.29 level. In conclusion, GRRF adopted GRRF-71-03, as reproduced in Annex III, and requested the secretariat to submit it to WP.29 and AC.1, as amendment to ECE/TRANS/WP.29/2011/94, for consideration at their November 2011 sessions.

11. The AMEVSC Chair reported on the progress made by his group (GRRF-71-20) from the last GRRF session. GRRF noted that the next meeting was scheduled to be held on 18 October 2011 and that a proposal on simulation tools should be submitted to GRRF for consideration at its February 2012 session.

12. The expert from OICA introduced ECE/TRANS/WP.29/GRRF/2011/36 clarifying that, for converted vehicles, the ESC test report may only be used with the agreement of the holder of the original vehicle braking approval. The AMEVSC secretariat proposed in GRRF-71-15 that only information to the manufacturer of the original braking system approval should be provided. GRRF agreed to consider again this issue at its next session on the basis of a revised text from CLEPA and OICA combining the two proposals.

13. The expert from OICA presented GRRF-71-17 on ESC exemptions. GRRF agreed in principle to move the ESC exemptions from footnote 12 to the core text of the Regulation. However, GRRF could not reach a final decision on the additional exemptions proposed in GRRF-71-17. GRRF agreed to reconsider the matter at its February 2012 session on the basis of a revised proposal by the expert from OICA.

14. The expert from Australia proposed in GRRF-71-08 to include in Regulation No. 13 the mandatory installation of ESC for N₁ vehicles. The preliminary view from GRRF was that Contracting Parties can already apply ESC to N₁ vehicles (by virtue of para 5.2.1.33.) or through Regulation R13-H. It was suggested that Australia consider comments and, if necessary, raise this subject again at the February 2012 session.

B. Trailer braking

Documentation: ECE/TRANS/WP.29/GRRF/2011/33
Informal documents GRRF-71-18 and GRRF-71-19

15. The expert from CLEPA presented ECE/TRANS/WP.29/GRRF/2011/33 allowing trailer manufacturers to equip their semi-trailers to achieve a higher deceleration. GRRF adopted ECE/TRANS/WP.29/GRRF/2011/33, not amended, and requested the secretariat to submit it to WP.29 and AC.1, for consideration at their March 2012 sessions, as draft Supplement 10 to the 11 series of amendments to Regulation No. 13.

16. The expert from Denmark presented GRRF-71-18 and GRRF-71-19 in order to enhance the brake compatibility between trucks and trailers. GRRF noted a number of comments and agreed to consider again this issue at its next session. The secretariat was requested to make GRRF-71-18 and GRRF-71-19 available with an official symbol unless a revised proposal from Denmark was provided.

C. Fully Automated Coupling Systems (FACS)

Documentation: Informal documents GRRF-71-22 and ACV-01-04-Rev.1

17. The Chair of the informal group on Automated Connections between Vehicles (ACV, former "FACS") reported on the progress made by the group (GRRF-71-22). GRRF discussed again the scope of work of this group and invited the informal group to clarify its Terms of Reference (presently ACV-01-04-Rev.1) for the February 2012 session of GRRF.

D. Clarifications

Documentation: ECE/TRANS/WP.29/GRRF/2010/19
ECE/TRANS/WP.29/GRRF/2010/21 and Corr.1
ECE/TRANS/WP.29/GRRF/2011/32
ECE/TRANS/WP.29/GRRF/2011/34
ECE/TRANS/WP.29/GRRF/2011/35
Informal document GRRF-69-18

18. The expert from India withdrew ECE/TRANS/WP.29/GRRF/2010/19 and GRRF-69-18 clarifying Regulation No. 13-H with regard to Brake Assist Systems (BAS).

19. The expert from Japan introduced ECE/TRANS/WP.29/GRRF/2010/21 and ECE/TRANS/WP.29/GRRF/2010/21/Corr.1 proposing to replace, in Regulations Nos. 13 and 13-H, the fixed reference to Regulation No. 10 by a dynamic reference. The expert from CLEPA and OICA proposed in ECE/TRANS/WP.29/GRRF/2011/34 an alternative wording for the dynamic reference. The GRRF Chair proposed to seek guidance from WP.29 on this issue that is not specific to GRRF but concerns all the groups of experts.

20. GRRF considered and adopted ECE/TRANS/WP.29/GRRF/2011/32 correcting a figure in Regulation No. 13. GRRF noted that the secretariat had already included this correction in Revision 7 of Regulation No. 13.

21. The experts from CLEPA and OICA presented ECE/TRANS/WP.29/GRRF/2011/35 clarifying the levels of braking performance in the different positions of the ignition key. GRRF noted a number of comments and agreed to consider at its next session a revised proposal from CLEPA and OICA taking into account the comments received.

E. Braking symbols in Regulation No. 121 (Identification of controls, tell-tales and indicators)

Documentation: ECE/TRANS/WP.29/GRSG/2011/7
ECE/TRANS/WP.29/GRSG/2011/32
ECE/TRANS/WP.29/GRRF/2011/37
Informal documents GRRF-71-14, GRSG-101-02

22. GRRF considered ECE/TRANS/WP.29/GRRF/2011/37, GRRF-71-14 and GRRF-101-02, proposing to move all ESC related symbols from Regulations Nos. 13 and 13-H to Regulation No. 121. GRRF supported in principle ECE/TRANS/WP.29/GRRF/2011/37, GRRF-71-14 and GRRF-101-02. GRRF agreed to consider the amendment to Regulation No. 13 and 13-H at its next session on the basis of a revised proposal from OICA. The expert from Canada explained the justification for ECE/TRANS/WP.29/GRRF/2011/37 which aims to avoid using the ESC symbol in different colours to convey different meanings. Canada suggested that people suffering from colour blindness would have difficulty identifying the signal. Whilst there was little support for the specific amendments to Regulation No. 13-H, GRRF supported the principle

of defining symbols in Regulation No. 21 and noted overlaps with wider discussions at the Working Party on General Safety (GRSG).

23. Following the request of GRSG (ECE/TRANS/WP.29/GRSG/79, para. 31), GRRF considered and supported ECE/TRANS/WP.29/GRSG/2011/32 superseding ECE/TRANS/WP.29/GRSG/2011/7 and adapting the requirements on braking symbols to technical progress.

24. The secretariat was requested to inform GRSG about the outcome of the GRRF discussion.

F. Other business

25. GRRF noted that no document was provided under this agenda item.

V. Regulation No. 55 (Mechanical couplings) (agenda item 4)

Documentation: ECE/TRANS/WP.29/GRRF/2011/7
Informal documents GRRF-71-05 and GRRF-71-07

26. The expert from Germany introduced ECE/TRANS/WP.29/GRRF/2011/7 and GRRF-71-05 clarifying the notion of drawbar type coupling. He also presented GRRF-71-07 updating the Regulation on a number of issues, in particular to cover innovative devices. GRRF noted a number of comments and agreed to reconsider this matter at its February 2012 session on the basis of revised proposal by the expert from Germany consolidating ECE/TRANS/WP.29/GRRF/2011/7, GRRF-71-05 and GRRF-71-07.

VI. Regulation No. 90 (Replacement brake linings) (agenda item 5)

Documentation: ECE/TRANS/WP.29/GRRF/2011/38
Informal document GRRF-71-02

27. GRRF considered ECE/TRANS/WP.29/GRRF/2011/38 by the experts from CLEPA and OICA clarifying the 02 series of amendments to Regulation No. 90. GRRF adopted the proposal as amended below and requested the secretariat to submit it to WP.29 and AC.1, for consideration at their March 2012 sessions, as draft Supplement 1 to the 02 series of amendments to Regulation No. 90.

Page 18, paragraph 4.2.1.1.3., fourth indent

For less than 300 brake applications read less than 250 brake applications

28. GRRF considered GRRF-71-02 by the expert from FEMFM proposing that no test be required for "identical" replacement brake linings as it is the case for "identical" replacement discs and drums. GRRF noted a number of comments and agreed to consider again this proposal with an official symbol.

VII. Tyres (agenda item 6)

A. Global technical regulation on tyres

Documentation: Informal document GRRF-71-32

29. The Chair of the informal group on the tyre gtr reported on the progress made by the group. GRRF noted that the group would meet again on 16 September 2011 and that a proposal should be submitted to GRRF for consideration at its February 2012 session. GRRF agreed to refer GRRF-71-32 by the expert from India to the informal group.

B. Regulations Nos. 30 and 54 (Pneumatic tyres)

Documentation: ECE/TRANS/WP.29/GRRF/2011/13
ECE/TRANS/WP.29/GRRF/2011/14
Informal documents GRRF-71-28 and GRRF-71-31

30. The expert from ETRTO recalled ECE/TRANS/WP.29/GRRF/2011/13 and ECE/TRANS/WP.29/GRRF/2011/14, harmonizing the definitions used in Regulations Nos. 30 and 54 with those of the 02 series of amendments to Regulation No. 117. The expert from Germany underlined that some proposed definitions diverged with those used within the European Union. The expert from France proposed in GRRF-71-31 to further develop the definition of snow tyre and to align the snow tyre markings requirements in Regulations Nos. 30, 54 and 117. GRRF agreed to continue consideration of that matter at its February 2012 session on the basis of a proposal prepared by France in collaboration with experts from Germany, the European Commission, OICA, ETRTO and all the interested experts (Focal point: Mr. Lescail from France: lescail@utac.com).

31. GRRF agreed to consider GRRF-71-31 at its next session and requested the secretariat to make it available with an official symbol.

C. Regulation No. 106 (Tyres for agricultural vehicles)

Documentation: ECE/TRANS/WP.29/GRRF/2011/31
Informal document GRRF-71-13

32. Due to time constraints, GRRF agreed to consider ECE/TRANS/WP.29/GRRF/2011/31 and GRRF-71-13 at its next session.

D. Regulation No. 117 (Tyres - Rolling resistance, rolling noise and wet grip)

Documentation: ECE/TRANS/WP.29/GRRF/2011/12
ECE/TRANS/WP.29/GRRF/2011/29
ECE/TRANS/WP.29/GRRF/2011/30
Informal documents GRRF-69-23, GRRF-71-04, GRRF-71-06, GRRF-71-09, GRRF-71-10, GRRF-71-11 and GRRF-71-12 and GRRF-71-29

33. The expert from EC introduced ECE/TRANS/WP.29/GRRF/2011/12 improving the current wet grip test method. The expert from ETRTO proposed GRRF-69-23 improving the wording of the EC proposal. Furthermore, the expert from ETRTO presented in GRRF-71-10 scientific data supporting ECE/TRANS/WP.29/GRRF/2011/12. The expert

from Germany questioned the use of references to private standards, such as standards of the American Society for Testing and Materials (ASTM), which are not publicly available. The GRRF Chair offered to seek guidance from WP.29 on this horizontal issue. GRRF adopted ECE/TRANS/WP.29/GRRF/2011/12 as amended in Annex IV and agreed to send it to WP.29 and AC.1 for consideration at their March 2012 sessions, as part of draft Supplement 1 to the 02 series of amendments of Regulation No. 117, subject to a final review by GRRF at its February 2012 session (see also para. 35).

34. GRRF followed with interest the presentation (GRRF-71-06) made by the expert on behalf of ISO on a new test method for wet grip for buses and truck developed by ISO. Further information can be provided by Mr Butcher (email: sbutcher@rma.org).

35. The expert from ETRTO presented ECE/TRANS/WP.29/GRRF/2011/30, GRRF-71-04 and GRRF-71-12 introducing a new method for defining C3 snow tyres. GRRF adopted ECE/TRANS/WP.29/GRRF/2011/30 as amended by Annex IV, and agreed to send it to WP.29 and AC.1, for consideration at their March 2012 sessions, as part of draft Supplement 1 to the 02 series of amendments of Regulation No. 117 (see also para. 33), subject to a final review by GRRF at its February 2012 session, as well as the review of the proposal by the Working Party on Noise (GRB).

36. Due to lack of time, GRRF agreed to consider, at its next session, ECE/TRANS/WP.29/GRRF/2011/29 and GRRF-71-11 on an alternative to define C2 snow tyres. Following the adoption of ECE/TRANS/WP.29/GRRF/2011/30, GRRF agreed to remove from the agenda GRRF-71-09 combining ECE/TRANS/WP.29/GRRF/2011/29 and ECE/TRANS/WP.29/GRRF/2011/30.

37. GRRF agreed to consider GRRF-71-29 with an official symbol at its next session.

38. The secretariat was requested to inform GRB about the outcome of the GRRF discussion on Regulation No. 117.

E. Other business

39. No document was provided under this agenda item.

VIII. Other business (agenda item 7)

A. Tributes

40. The GRRF Chairman thanked Mr. Gaupp (Germany) for his expert and valuable contribution to the work of GRRF for over twenty years and wished him a healthy, happy and long retirement.

41. Learning also that Mr. Zastrow (OICA) would no longer attend GRRF sessions, the GRRF Chair thanked him for his expertise and excellent contribution to GRRF for over seven years. GRRF wished him all the best in his new responsibilities.

IX. Election of officers (agenda item 8)

Documentation: TRANS/WP.29/690 and TRANS/WP.29/690/Amend.1

42. In compliance with Rule 37 of the Rules of Procedure (TRANS/WP.29/690, as amended by Amendment 1), GRRF called the election of officers on Tuesday morning.

Mr. S. Sopp (United Kingdom) was unanimously elected Chair of GRRF for this session and for the sessions scheduled for the year 2012.

X. Provisional agenda for the seventy-second session

43. GRRF did not consider the agenda for its seventy-second session, scheduled to be held in Geneva from 20 (p.m.) to 24 (a.m.) February 2012. It was agreed that the Chair, jointly with the secretariat, would propose a draft agenda.

Annex I

List of informal documents considered during the session

List of informal documents (GRRF-71-...) of the session (English only)

<i>No.</i>	<i>(Author) Title</i>	<i>Follow-up</i>
1	(GRRF Chair) Running order of the provisional agenda of the 71st session of GRRF	(f)
2	(FEMFM) Draft Proposal for amendment of Regulation No. 90	(c)
3	(AMEVSC) Amendments to ECE/TRANS/WP.29/2011/94 - Proposal for amendments to Regulation No. 13 (Heavy vehicle braking)	(a)
4	(ETRTO) Proposal for corrigendum to document ECE/TRANS/WP.29/GRRF/2011/30 - (ETRTO) - Proposal for amendments to Regulation No. 117 (Tyre rolling noise and wet grip adhesion) (C3 tyres)	(a)
5	(Germany) Proposal for amendments to Regulation No. 55 (Mechanical couplings)	(e)
6	(ISO) ISO 15222:2011- Overview	(f)
7	(Germany) Proposal for amendments to Regulation No. 55 (Mechanical couplings)	(e)
8	(Australia) Proposal for draft amendments to Regulation No. 13 (Heavy vehicle braking)	(e)
9	(ETRTO) Proposal for merging ECE/TRANS/WP.29/GRRF/2011/29 and ECE/TRANS/WP.29/GRRF/2011/30 related to amendments to Regulation No. 117 (Tyre rolling noise and wet grip adhesion)	(f)
10	(ETRTO) Proposal for amendment to Regulation N° 117 (Tyre rolling noise and wet grip adhesion) (Wet grip C1 tyres)	(f)
11	(ETRTO) Proposal for amendment to Regulation N° 117 (Tyre rolling noise and wet grip adhesion) (Snow test C2 tyres)	(d)
12	(ETRTO) Proposal for amendment to Regulation N° 117 (Tyre rolling noise and wet grip adhesion) (Snow test C3 tyres)	(f)
13	(ETRTO) Proposal for amendment to Regulation N° 106 (Tyres for agricultural vehicles)	(d)
14	(OICA) Proposal for amendments to Regulation Nos. 13-H and 13 (Brakes of vehicles)	(e)
15	(AMEVSC) Alternative proposal to the amendment proposed in ECE/TRANS/WP.29/2011/36 - Proposal for amendments to Regulation No. 13 (Heavy vehicle braking)	(f)
16	(OICA) Proposal for amendment to ECE/TRANS/WP.29/2011/93 (01 series of amendments to the draft Regulation on AEBS)	(f)
17	(OICA) Proposal for amendment to Regulation No. 13 (Heavy vehicle braking)	(e)
18	(Denmark) Coupling force control – Regulation No. 13 (Heavy vehicle braking)	(e)
19	(Denmark) Compatibility bands – Regulation No. 13 (Heavy vehicle braking)	(e)

<i>No.</i>	<i>(Author) Title</i>	<i>Follow-up</i>
20	(AMEVSC Chair) Report of the AMEVSC informal group	(f)
21	(Germany) Legal concerns of the German Type-Approval Authority on Regulation No. 13	(f)
22	(ACV informal group) Report of the GRRF informal group on Automated Connections between Vehicles (ACV)	(f)
23	(EC) European Commission comments to GRRF-71-16 (OICA proposal for amendment to	(f)
24- Rev.1	(OICA) Proposal for amendments to the new UN Regulation on advanced emergency braking systems	(b)
25	(AEBS/LDWS Chair) Proposal for amendments to ECE/TRANS/WP.29/2011/92 and ECE/TRANS/WP.29/2011/93 (Advanced Emergency Braking Systems)	(f)
26	(EC) European Commission alternative proposal for the wording of the footnote 4 proposed by OICA in relation to the pass/fail values for vehicle types of category N2 < 8 tons and category M2 in the 01 series of amendments(document GRRF-71-24	(f)
27- Rev-1	(Secretariat) Adopted amendments to ECE/TRANS/WP.29/2011/92 and ECE/TRANS/WP.29/2011/93 (Advanced Emergency Braking Systems)	(a)
28	(ETRTO) Proposal for amendments to Regulation No. 30 (Uniform provisions concerning the approval of pneumatic Tyres for motor vehicles and their trailers) : regulatory markings for "temporary uses spare tyres	(d)
29	(France) Amendments to the 02 series of amendments to Regulation No. 117 (Tyre rolling noise, wet grip adhesion and rolling resistance)	(c)
30- Rev.2	(Secretariat) Additional adopted amendments to ECE/TRANS/WP.29/2011/93 (Advanced Emergency Braking Systems)	(a)
31	(France) Proposal for amendments to Regulations N° 30, 54 and 117	(d)
32	(India) Additional Comments from India on the GTR for Passenger Vehicle Tyres under formulation by the Working Group on Tyres	(f)
33	(Secretariat) Summary of decisions on documents considered at the 71st session of GRRF and follow up	(f)

Reconsideration of informal documents from the previous sessions of GRRF or other Working Parties (English only)

<i>No.</i>	<i>(Author) Title</i>	<i>Follow-up</i>
GRRF-69-18	(India) Proposal for draft amendments to Regulation No. 13-H (Brakes of M ₁ and N ₁ vehicles)	(f)
GRRF-69-23	(ETRTO) Proposal to amend ECE/TRANS/WP29/GRRF/2011/12 - Proposal for Supplement 1 to the 01 series of amendments to Regulation No. 117 (Tyre rolling noise and wet grip adhesion)	(b)
GRSG-101-02	(OICA) Proposal for changes to Regulation No. 121 (Identification of controls, tell-tales and indicators)	(a)
ACV-01-04-Rev.1	(CLCCR) Corrected Terms of Reference ACV group	(e)

Notes:

- (a) Submitted with no change to WP.29 for consideration.
- (b) Submitted with changes to WP.29 for consideration.
- (c) Resume consideration on the basis of an official document.
- (d) Kept as reference document/continue consideration.
- (e) Revised proposal for the next session.
- (f) Consideration completed or to be superseded.

Annex II

Adopted amendments to the draft Regulation on Advanced Emergency Braking Systems

Adopted amendments to ECE/TRANS/WP.29/2011/92 (see para. 9).

Introduction, amend to read:

"0. Introduction (for information)

The intention ... conditions.

While, in general, those vehicle categories will benefit from the fitment of an advanced emergency braking system, there are sub-groups where the benefit is rather uncertain because they are primarily used in other conditions than highway conditions (e.g. buses with standing passengers i.e. classes I, II and A). Regardless from the benefit, there are other sub-groups where the installation of AEBS would be technically difficult (e.g. position of the sensor on vehicles of category G and special purpose vehicles, etc.).

In addition, systems intended for vehicles not equipped with a pneumatic rear-axle suspension require the integration of advanced sensor technology to take into account the variation of the pitch angle of the vehicle. Contracting Parties wishing to apply this regulation to these vehicles should provide adequate time for this.

The system shall ..."

Paragraph 1. , amend to read:

"1. Scope and purpose

This Regulation applies to the approval of vehicles of category¹:

- (a) N₂ above 8 tons;
- (b) M₃; and
- (c) N₃.

equipped with a pneumatic or air over hydraulic braking system with regard to an on-board system to avoid or mitigate the severity of a rear-end in lane collision."

¹ As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3.), document ECE/TRANS/WP.29/78/Rev.2, para. 2

Paragraphs 2.4. to 2.13., renumber as paragraphs 2.3. to 2.12.

Paragraph 3.2.1. , correct to read

"3.2.1. A description of the vehicle type with regard to the items mentioned in paragraph 2.2, together with a ... shall be specified."

Paragraph 5.1.1. , correct to read

"5.1.1. Any vehicle fitted with an AEBS complying with the definition of paragraph 2.1. shall meet the performance requirements contained in paragraphs 5.1. to 5.6.2. of this Regulation and shall be equipped with an anti-lock braking function in accordance with the performance requirements of Annex 13 of Regulation No. 13."

[OR]

[Paragraph 5.1.1. , amend to read:

"5.1.1. Any vehicle equipped with a pneumatic rear-axle suspension and with an AEBS complying with the definition of paragraph 2.1. shall meet the performance requirements contained in paragraphs 5.1. to 5.6.2. of this Regulation and shall be equipped with an anti-lock braking function in accordance with the performance requirements of Annex 13 of Regulation No. 13.

Vehicles equipped with another type of rear suspension may also be type approved provided that the requirements contained in paragraphs 5.1. to 5.6.2. are fulfilled."]

Paragraph 5.2.2., amend to read:

"5.2.2. Subsequent to the warning(s) of paragraph 5.2.1.1., and subject to the provisions of paragraphs 5.3.1. to 5.3.3., there shall be an emergency braking phase having the purpose of significantly decreasing the speed of the subject vehicle. This shall be tested in accordance with paragraphs 6.4. and 6.5."

Paragraph 6.4.1., correct to read:

"6.4.1. The subject vehicle ...
... at least 120 m from the target.

From the start of the functional part until the point of collision there shall be no adjustment to any control of the subject vehicle by the driver other than slight adjustments to the steering control to counteract any drifting."

Paragraph 7.1., amend to read:

7.1. Every modification of the vehicle type as defined in paragraph 2.2. above shall ... then either:

Annex 3, amend the table to read:

"

A	B	C	D	E	F	G	H	
	Stationary target			Moving target				
	Timing of warning modes		Speed reduction (ref. paragraph 6.4.4.)	Timing of warning modes		Speed reduction (ref. paragraph 6.5.3.)	Target speed (ref. paragraph 6.5.1.)	
	At least 1 haptic or acoustic (ref. paragraph 6.4.2.1.)	At least 2 (ref. paragraph 6.4.2.2.)		At least 1 haptic or acoustic (ref. paragraph 6.5.2.1.)	At least 2 (ref. paragraph 6.5.2.2.)			
M ₃ , N ₂ >8t and N ₃	Not later than 1.4 s. before the start of emergency braking phase	Not later than 0.8 s. before the start of emergency braking phase	Not less than 10 km/h	Not later than 1.4 s. before the start of emergency braking phase	Not later than 0.8 s. before the start of emergency braking phase	No impact	32 ± 2 km/h	1

"

Adopted amendments to ECE/TRANS/WP.29/2011/93

Paragraph 1., amend to read (footnote 1 remains unchanged):

"1. Scope and purpose

This Regulation applies to the approval of vehicles of category M₂, N₂, M₃ and N₃¹ with regard to an on-board system to avoid or mitigate the severity of a rear-end in lane collision."

[Paragraph 5.1.1., amend to read:

"5.1.1. Any vehicle equipped with an AEBS complying with the definition of paragraph 2.1. shall meet the performance requirements contained in paragraphs 5.1. to 5.6.2. of this Regulation and shall be equipped with an anti-lock braking function in accordance with the performance requirements of Annex 13 of Regulation No.13." [This amendment is necessary only if the alternative drafting for paragraph 5.1.1. in ECE/TRANS/WP.29/2011/92/Amend.1 is adopted]

Paragraph 12., amend to read:

" 12. Transitional provisions

- 12.1. As from the official date of entry into force of the 01 series of amendments, no Contracting Party applying the 01 series of amendments to this Regulation, shall refuse to grant type Approvals in accordance with the 01 series of amendments of this Regulation.
- 12.2. As from the date of into force of the 01 series of amendments to this Regulation, Contracting Parties applying this Regulation may continue granting type approvals and extensions of type approvals to the 00 series of amendments to this Regulation.

[In accordance with Article 12 of the 1958 Agreement, the 00 series of amendments may be used as an alternative to the 01 series. Contracting Parties shall notify to the Secretariat General which alternative they apply. In the absence of notification of Contracting Parties to the Secretariat General, Contracting Parties will be considered to apply the 01 series.]

- 12.3. As from the date of entry into force of the 01 series of amendments, no Contracting Party applying this Regulation shall refuse national or regional type approval of a vehicle type approved to the 01 series of amendments to this Regulation.
- 12.4. Until 1 November 2016, no Contracting Party applying this Regulation shall refuse national or regional type approval of a vehicle type approved to the 00 series of amendments to this Regulation.
- 12.5. As from 1 November 2016, Contracting Parties applying the 01 series of amendments to this Regulation shall not be obliged to accept, for the purpose of national or regional type approval, a vehicle type approved to the 00 series of amendments to this Regulation."

Annex 3, amend the table to read:

"

A	B	C	D	E	F	G	H	
	Stationary target			Moving target				
	Timing of warning modes		Speed reduction	Timing of warning modes		Speed reduction	Target speed	
	At least 1 haptic or acoustic (ref. paragraph 6.4.2.1.)	At least 2 (ref. paragraph 6.4.2.2.)	(ref. paragraph 6.4.4.)	At least 1 haptic or acoustic (ref. paragraph 6.5.2.1.)	At least 2 (ref. paragraph 6.5.2.2.)	(ref. paragraph 6.5.3.)	(ref. paragraph 6.5.1.)	
M ₃ ¹ , N ₂ >8t and N ₃	Not later than 1.4 s. before the start of emergency braking phase	Not later than 0.8 s. before the start of emergency braking phase	Not less than 20 km/h	Not later than 1.4 s. before the start of emergency braking phase	Not later than 0.8 s. before the start of emergency braking phase	No impact	12 ± 2 km/h	1
N ₂ ≤ 8 t ² and M ₂ ²	The pass/fail values for the warning and activation test requirements in Cells B2 to H2 applicable to vehicles of category N ₂ ≤ 8 tons and of category M ₂ will be defined by GRRF and adopted by WP.29 at least 36 months before 1 November 2016. Until such values are adopted, Contracting Parties shall refrain from issuing type-approvals for these vehicles in accordance with the 01 series of amendments to the AEBS Regulation.							2

¹ Vehicles of category M₃ with hydraulic braking system are subject to the requirements of row 2

² Vehicles with pneumatic braking systems are subject to the requirements of row 1"

Annex III

Draft amendments to Regulation No. 13

GRRF adopted GRRF-71-03 as reproduced below (see para. 10).

Annex 11 – Appendix 2

Paragraph 2.2.2.2., amend to read:

"2.2.2.2. The brake input ... to produce diagram 2 of Annex 19-Part 1."

Paragraph 3.5.1., amend to read:

"3.5.1. Supplementary cold performance test

The preparation of ... with paragraph 4.4.2. of Annex 19-Part 1 of this Regulation.

In the case, ... according to paragraph 4.4.3. of Annex 19-Part 1 of this Regulation, ... verification according to paragraph 4.4.3. of Annex 19-Part 1.

It is permissible to carry out ... in accordance with paragraph 4. of Annex 19-Part 1 of this Regulation.

It is also ... one after the other.

Some brake applications according to Annex 19-Part 1, paragraph 4.4.2.6. may be ... by the brake manufacturer."

Paragraph 3.8., the second table, row (f), amend to read:

"

(f) Declared threshold torque $C_{0,dec}$	It shall be checked that the brake performance remains within the corridors of Diagram 2 of Annex 19-Part 1.
---	--

"

Paragraph 3.9.1., amend to read:

"3.9.1. Test report number

The test report ... a dot or slash.

The base part ... (according to paragraph 4. of Annex 19-Part 1 to this Regulation)."

Paragraph 4.3.1.1., amend to read:

"4.3.1.1. The predicted actuator ... the procedure defined in item paragraph 2. of Annex 19-Part 1 to this Regulation ... Appendix 1 of Annex 19."

Annex 11 – Appendix 3

Paragraph 2.3.3., amend to read:

"2.3.3. This item ... defined in paragraph 4. of Annex 19-Part 1 to this Regulation to ... brake factor (B_F)."

Paragraph 4., amend to read:

"4. This test ... where appropriate paragraph 4. of Annex 19-Part 1 to Regulation No. 13 ... amendments."

Annex 19

Paragraph 4.4.2.9., amend to read:

"4.4.2.9. If the manufacturer ...
... The results of at least 3 tests in accordance with paragraph 4.4.3.4. of Annex 19-Part 1 conducted under the conditions of the laden Type-0 test..."

Annex 19 – Appendix 1

Paragraph 3.3.1., amend to read:

"3.3.1. Pressure range over which the above effective stroke is valid:
(see paragraph 2.3.4. of Annex 19-Part 1)."

Annex 20

Paragraph 7.3.1.4., amend to read:

"7.3.1.4. With the brakes ... in accordance with paragraph 5.4.1.2.4.2. of Annex 19-Part 1 to this Regulation, the energy storage ..."

Paragraph 7.4.2.1., amend to read

"7.4.2.1. The relationship of ... referred to in paragraph 5.2. of Annex 19-Part 1 to this Regulation."

Paragraph 7.4.8.1., amend to read

"7.4.8.1. Any installation limitations ... referred to in paragraph 5.2. of Annex 19-Part 1 to this Regulation shall apply."

Annex IV

Draft amendments to Regulation No. 117

GRRF adopted GRRF-69-23 modifying ECE/TRANS/WP.29/GRRF/2011/12, and GRRF-71-04 amending ECE/TRANS/WP.29/2011/30, both as reproduced below (see paras. 33 and 35). Changes to ECE/TRANS/WP.29/GRRF/2011/12 and ECE/TRANS/WP.29/2011/30 are shown in bold.

Adopted amendments to ECE/TRANS/WP.29/2011/30

Paragraph 2.16., amend to read:

- "2.16. "Standard reference test tyre" (SRTT) means a tyre that is produced, controlled and stored in accordance with the ASTM (American Society for Testing and Materials) standards
- (a) E1136-93 (2003) for the size P195/75R14
 - (b) **F2871 (2011) for the size 245/70R19.5**
 - (c) F2870 (2011) for the size 315/70R22.5"

Paragraph 2.17.3., amend to read:

- "2.17.3. "Control tyre" means a normal production tyre that is used to establish the wet grip or snow grip performance of tyre sizes unable to be fitted to the same vehicle as the standard reference test tyre – see paragraph 4.1.7. of Annex 5 and paragraph 3.4.3. of Annex 7 to this Regulation."

Annex 5, paragraph 2.2.2.15.1., delete the amendment.

Annex 5, paragraph 2.2.2.15.5., delete the amendment.

Annex 7, new paragraph 4.3.4., amend to read:

- "4.3.4. For Acceleration test ...shall be used in the **particular case** of paragraph 4.7.2.1.1.
The slip ratio ..."

Adopted amendments to ECE/TRANS/WP.29/2011/12

Annex 5

New paragraph 1., *amend to read:*

- "1. **Reference standards**
The following documents listed apply."

New paragraphs 1.4. and 1.5., *amend to read:*

- "1.4. ASTM E 1136-93 (Reapproved 2003), Standard Specification for a Radial Standard Reference Test Tire **P195/75R14**.
- 1.5. ASTM F 2493-08, Standard Specification for a Radial Standard Reference Test Tire **P225/60R16**. "

New paragraph 2.4., *amend to read:*

"2.4. *"reference tyre(s) (R)"* means a tyre or a tyre set that has the characteristics indicated in the ASTM F 2493-08 and referred to as the Standard Reference **Test Tyre.**"

Insert new paragraphs 2.12. and 2.13., *to read:*

"2.12. **"SRTT14"** means the ASTM E 1136-93 (Reapproved 2003), Standard Specification for a Radial Standard Reference Test Tire P195/75R14.

2.13. **"SRTT16"** means the ASTM F 2493-08, Standard Specification for a Radial Standard Reference Test Tire P225/60R16."

New paragraph 3.2.1., *amend to read:*

3.2.1. British Pendulum Number (BPN) method (a)

The British Pendulum ...

... Celsius.

Effects of slider pad wear: **the** pad shall

... shall not exceed 10 per cent.

New paragraph 3.2.2., *amend to read(including deletion of footnotes):*

"3.2.2. ASTM E 1136 Standard Reference Test Tyre method **(b)**

By derogation with **paragraph 2.4.**, this method uses the reference tyre that has the characteristics indicated in **the** ASTM E 1136-93 (Reapproved 2003) and referred to as SRTT14.

The average peak braking force coefficient ($\mu_{\text{peak,ave}}$) of the SRTT14 shall be 0.7 ± 0.1 at 65 km/h.

The average peak braking force coefficient ($\mu_{\text{peak,ave}}$) of the SRTT14 shall be corrected **for** the wetted road surface temperature as follows:

.... in degrees Celsius."

New paragraph 4.1., *amend to read:*

"4.1. Testing method **(a)** using an instrumented passenger car"

New paragraph 4.1.3., *amend to read:*

"4.1.3. Conditioning of the test track and wetting condition

The test track surface"

New paragraph 4.1.6.1., *amend to read:*

"4.1.6.1. Calculation of the average deceleration (*AD*)

The average deceleration (*AD*) is calculated for each valid test run in m/s^2 as follows:

$$AD = \left| \frac{S_f^2 - S_i^2}{2d} \right|$$

where:

S_f is the final speed in **m/s**; $S_f = 20 \text{ km/h} = 5.556 \text{ m/s}$

S_i is the initial speed in **m/s**; $S_i = 80 \text{ km/h} = 22.222 \text{ m/s}$

d is the distance covered between S_i and S_f **in metre.**"

New paragraph 4.1.6.3., *amend to read:*

"4.1.6.3. Calculation of adjusted average deceleration (Ra)

...

This adjusted AD of the reference tyre (Ra) is calculated in **m/s²** in accordance ..."

New paragraph 4.1.6.4., Table 2, *amend to read:*

"Table 2

Test Tyre	Braking force coefficient		
Reference tyre	$BFC(R)=$	Ra/g	
Candidate tyre	$BFC(T)=$	Ta/g	
g is the acceleration due to gravity, $g= 9.81 \text{ m/s}^2$			

"

New paragraph 4.1.6.5., *amend to read:*

"4.1.6.5. Calculation of the wet grip index of the candidate tyre

...

$a = -0.4232$ and $b = -8.297$ for normal tyres, $a = 0.7721$ and $b = 31.18$ for snow tyres [**a is expressed as (1/°C)**]"

New paragraph 4.1.7.1., *amend to read:*

"4.1.7.1. General

Where the candidate tyre size is significantly different from that of the reference tyre, a direct comparison on the same instrumented passenger car may not be possible. This testing method uses an intermediate tyre, hereinafter called the control tyre as defined in **paragraph 2.5.**"

New paragraph 4.1.7.2., *amend to read:*

"4.1.7.2. Principle of the approach

...

$$G_1 = \left[\frac{BFC(C)}{BFC(R)} \times 125 + a \times (t - t_0) + b \times \left(\frac{BFC(R)}{BFC(R_0)} - 1.0 \right) \right] \times 10^{-2}$$

G_2 is the relative wet grip index of the candidate tyre (T) compared to the control tyre (C) calculated as follows:

$$G_2 = \frac{BFC(T)}{BFC(C)} "$$

New paragraph 4.2., *amend to read:*

"4.2. Testing method (b) using a trailer towed by a vehicle or a tyre test vehicle"

New paragraph 4.2.2.2., *amend to read:*

4.2.2.2. Measuring equipment

...

- (a) overall system accuracy, force: ± 1.5 per cent of the full scale of the vertical load or braking force;
- (b) overall system accuracy, speed: ± 1.5 per cent of speed or ± 1.0 km/h, whichever is greater.

..."

New paragraph 4.2.4., *amend to read:*

"4.2.4. Wetting conditions

...

... at 65 km/h shall be 18 l/s per meter of width of wetted surface in case of a water depth of 1.0 mm."

New paragraph 4.2.7.2., *amend to read:*

"4.2.7.2. Test cycle

A number of test runs are made in order to measure the wet grip index of the candidate tyre (T) according to the following procedure, whereby each test run shall be made **from** the same ... one day.

After paragraph 4.2.8.3 and Table 3, insert a new paragraph 4.2.8.4. (Table 4 is moved after 4.2.8.4.), *to read:*

"4.2.8.4. Calculation of the average peak braking coefficient ($\mu_{peak,ave}$)

The average value of the peak braking coefficients ($\mu_{peak,ave}$) is calculated according to table 4 whereby Ta (a= 1, 2 or 3) is the average of the peak braking force coefficients measured for one candidate tyre within one test cycle."

New paragraph 4.2.8.5., *amend to read:*

"4.2.8.5. Calculation of the wet grip index of the candidate tyre

The wet grip index of the candidate tyre ($G(T)$) is calculated as follows:

$$G(T) = \left[\frac{\mu_{peak,ave}(T)}{\mu_{peak,ave}(R)} \times 125 + a \times (t - t_0) + b \times \left(\frac{\mu_{peak,ave}(R)}{\mu_{peak,ave}(R_0)} - 1.0 \right) \right] \times 10^{-2}$$

....

$\mu_{peak,ave}(R_0) = 0.85$ is the peak braking force coefficient for the reference tyre in the reference conditions

$a = -0.4232$ and $b = -8.297$ for normal tyres, $a = 0.7721$ and $b = 31.18$ for snow tyres" [**a is expressed as (1/°C)**]"

New Appendix, Example 1, *amend to read:*

"Appendix Test reports examples of wet grip index.

Example 1: Test report of wet grip index using trailer method

Test report number:		Test date:
Type of road surface:		Texture depth (mm):
μ peak (SRTT14E 1136):		or BPN:
Speed (km/h):		Water depth (mm):

No.	1	2	3	4	5	6	7	8	9	10
-----	---	---	---	---	---	---	---	---	---	----

..."

New Appendix, Example 2, *amend to read:*

"Example 2: Test report of wet grip index using passenger car method

...

No.	1	2	3	4	5
Brand	Uniroyal	TYRE B	TYRE C	TYRE D	Uniroyal

...

Front axle load (kg)					
Rear axle load (kg)					

...

BFC(R) reference tyre (SRTT16E)					
BFC(T) candidate tyre					
Wet grip index (%)					

"

Annex V

GRRF informal groups

<i>Informal group</i>	<i>Chairperson</i>	<i>Secretary</i>
Tyre gtr	Mr. I. Yarnold (United Kingdom) Phone: +44 207 944 2080 Fax: +44 207 944 2169 E-mail: ian.yarnold@dft.gsi.gov.uk	Mr. J.-C. Noirhomme (ETRTO) Phone: +32 2 344 4059 Fax: +32 2 344 1234 E-mail: info@etrto.org
Automatic Emergency Braking and Lane Departure Warning Systems (AEBS/LDWS)	Mr. J. Renders (EC) Phone : +32 2 2969962 Fax : +32 2 2969637 E-mail: johan.renders@ec.europa.eu	Mr. O. Fontaine (OICA) Phone : +33 1-43590013 Fax : +33 1-45638441 E-mail: ofontaine@oica.net
Alternative Method to assess the Electronic Vehicle Stability Control system (AMEVSC)	Mr. M. Loccufier (Belgium) Phone : +32 2-2773578 Fax : +32 2-2774021 E-mail: : michel.loccufier@mobilite.fgov.be	Mr. P. Jennison (CLEPA) Phone : +49 893-5472131 Fax : +49 893-5472535 E-mail : paul.jennison@knorr-bremse.com
Automated Connections between Vehicles (ACV)	Mr. A. Gunneriusson Phone: +46 243 755 48 Fax +46 243 750 89 E-mail: anders.gunneriusson@transportstyrelsen.se	Ms. Annie Luchie (CLCCR) Phone : +32 2 706 79 72 Fax : +32 2 706 79 76 E-mail : annie.luchie@agoria.be