



**Economic and Social
Council**

Distr.
GENERAL

TRANS/WP.29/GRSP/37
24 June 2005

Original: ENGLISH

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

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

Working Party on Passive Safety (GRSP)

**REPORT OF THE WORKING PARTY ON PASSIVE SAFETY (GRSP)
ON ITS THIRTY-SEVENTH SESSION**

(23-27 May 2005)

1. GRSP held its thirty-seventh session from 23 May (afternoon) to 27 May 2005 (morning only) under the chairpersonship of Mr. G. Mouchahoir (United States of America). 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; Finland; France; Germany; Hungary; Italy; Japan; Netherlands; Norway; Poland; Republic of Korea; Russian Federation; Spain; Sweden; United Kingdom; United States of America. A representative of the European Commission (EC) participated. Experts from the following non-governmental organizations participated: International Organization for Standardization (ISO), International Organization of Motor Vehicle Manufacturers (OICA); European Association of Automotive Suppliers (CLEPA); Consumers International (CI) and European Enhanced Vehicle-safety Committee (EEVC).
2. The informal documents distributed during the session are listed in Annex 1 to this report.

A. 1998 AGREEMENT

A.1. Draft global technical regulation (gtr) on pedestrian safety

Documentation: TRANS/WP.29/GRSP/2005/3; informal documents Nos. GRSP-37-15, GRSP-37-16 and GRSP-37-18 of Annex 1 to this report.

3. Mr. Y. Mizuno (Japan), Chairman of the informal working group, made a detailed presentation of the draft gtr (TRANS/WP.29/GRSP/2005/3). He also presented GRSP-37-15, indicating that Japan intended to include its text in the technical rationale section of the gtr. The expert from the United States of America made comments to the proposal (GRSP-37-18) and requested that the technical rationale section contain more detailed discussion on the reasoning for the gtr requirements. Other experts made oral comments to it. GRSP experts were requested to transmit their comments on the draft to the Chairman or to the secretariat of the informal group before July 2005, in order to be taken into consideration by the informal group, which will meet in July. Following that meeting, an updated draft will be transmitted for consideration at the GRSP December 2005 session. Mr. Mizuno updated the information about the progress of the work on the Pedestrian Legform Impactor (Flex-PLI) (GRSP-37-16) made by the evaluation group, which should complete its work by the end of 2007.

A.2. Draft global technical regulation (gtr) on head restraints

Documentation: TRANS/WP.29/GRSP/2004/15; informal document No. GRSP-37-19 of Annex 1 to this report.

4. Ms. S. Meyerson (United States of America), Chairwoman of the informal group, presented the first progress report of the informal group (GRSP-37-19), superseding TRANS/WP.29/GRSP/2004/15. She announced that the informal group would meet again on 13-15 June and 7-9 September 2005, and invited GRSP experts to participate at those sessions. The comments made by experts to the first progress report will be taken into account when drafting its definitive version to be submitted to WP.29 and AC.3. The Chairwoman informed GRSP that she expected to submit a draft gtr to AC.3 for consideration at its November 2006 session.

A.3. Global technical regulation No. 1 (Door locks and door retention components)

Documentation: Informal documents Nos. GRSP-36-5 and GRSP-37-17 of Annex 1 to this report.

5. To resolve the pending definition of an Auxiliary Latch System (GRSP-36-5), the expert from the United States of America presented a proposal (GRSP-37-17). The secretariat was requested to transmit that proposal with an official symbol for consideration by GRSP at its next session. GRSP agreed to decide if it would be adopted as a Corrigendum or as an Amendment to gtr No. 1.

A.4. Exchange of views on lower anchorages and tethers for child restraint systems.

Documentation: TRANS/WP.29/GRSP/2004/14.

6. As no new information was provided, the GRSP Chairman suggested removing this item from the agenda of the next meeting, unless concrete information would be provided.

A.5. Exchange of views on side impact dummy

Documentation: Informal documents Nos. GRSP-36-11, GRSP-37-4 and GRSP-37-21 of Annex 1 to the report of the previous and current session.

7. The expert from ISO gave a presentation on the WorldSID dummy (GRSP-37-21). The expert from ISO offered to GRSP experts free copies of draft standard ISO/IS 15830, parts 1 to 4, upon request, to be made to the email address indicated in GRSP-37-4.

A.5. Exchange of views on vehicle crash compatibility

8. The Chairman of the EEVC Working Group 12 informed GRSP that work would continue on the development of barrier tests. The GRSP Chairman invited him to report on the progress of work at the December 2005 session.

B. 1958 AGREEMENT

B.1. Amendments to Regulations

B.1.1. Regulation No. 14 (Safety-belt anchorages)

Documentation: TRANS/WP.29/GRSP/2004/23; TRANS/WP.29/GRSP/2005/4; informal documents Nos. GRSP-34-20, GRSP-36-13, GRSP-37-6, GRSP-37-9 and GRSP-37-14 of Annex 1 to the report of current and previous sessions.

9. Concerning the definition of effective belt anchorage (TRANS/WP.29/GRSP/2004/23), GRSP agreed with the proposal reproduced below. The secretariat was requested to transmit the adopted proposal for consideration to WP.29 and AC.1 at their November 2005 session as draft Corrigendum 1 to Revision 3 of Regulation No. 14.

Paragraph 2.4.1.1., should be deleted.

Paragraphs 2.4.1.2. to 2.4.1.3. (former), renumber as paragraphs 2.4.1.1. to 2.4.1.2.

10. Regarding the proposed amendments to figures 6 and 7 of Annex 9 (TRANS/WP.29/GRSP/2005/4, GRSP-34-20, GRSP-36-13, GRSP-37-14), GRSP agreed that figure 6 did not need to be amended and agreed to amend figure 7 as reproduced in Annex 2 to this report. The secretariat was requested to transmit the adopted proposal to WP.29 and AC.1, for consideration at their November 2005 sessions, as draft Corrigendum 3 to the 06 series of amendments to Regulation No. 14.

11. The expert from OICA informed GRSP about the difficulties for N₂ and N₃ vehicles equipped with suspended seats to comply with the prescriptions of paragraph 7.1.1. of the Regulation (GRSP-37-6). He requested the experts to provide accident data in order to verify the relevance of the requirements of that paragraph. The GRSP Chairman invited OICA to contact experts before transmitting a proposal for amending the Regulation.

12. The expert from Japan introduced a proposal to avoid the interpretation that safety-belt anchorages were not required for seats capable of being turned to or placed in a rearward position (GRSP-37-9). The secretariat was requested to distribute it with an official symbol for consideration at the next session.

B.1.2. Regulation No. 16 (Safety-belts)

Documentation: TRANS/WP.29/GRSP/2004/22; TRANS/WP.29/GRSP/2004/26/Rev.1; TRANS/WP.29/GRSP/2005/7; informal documents Nos. GRSP-37-13 and GRSP-37-22 of Annex 1 to this report.

13. GRSP considered an updated proposal by the expert from France concerning the installation of safety-belt reminders (TRANS/WP.29/GRSP/2004/26/Rev.1, superseding TRANS/WP.29/GRSP/2004/22). Comments to the proposal were made by the United Kingdom (exemptions to the safety-belt wearing, need of a cost/benefit analysis, and transitional provisions) Japan (need to adopt this proposal as a new series of amendments) and CLEPA (keep the current marking of safety-belts). GRSP experts were requested to send written proposals to the expert from France for the preparation of a consolidated proposal, for consideration at the next session.

14. Concerning the construction of the child restraint fixtures (TRANS/WP.29/GRSP/2005/7 and GRSP-37-22), GRSP adopted the proposal as reproduced below. The secretariat was requested to transmit the adopted proposal to WP.29 and AC.1 for consideration at their November 2005 sessions as draft Corrigendum 4 to Supplement 15 to the 04 series of amendments to Regulation No. 16.

Annex 17, Appendix 2,

Paragraph 4., add at the end:

"4.

The fixtures below shall be constructed with a mass between 5 and 15 kg and shall be of suitable durability and stiffness to satisfy the functional requirements."

15. GRSP agreed to consider at its December 2005 session the proposal transmitted by the expert from France (GRSP-37-13) with an official symbol. The expert offered to transmit an updated proposal, taking into consideration the comments received before 9 September 2005.

B.1.3. Regulation No. 29 (Cabs of commercial vehicles)

16. The expert from the Russian Federation, Chairman of the informal group, informed GRSP that preparatory work was still in progress in his country. He suggested including different tests for the different categories of vehicles. He said that additional experimental tests were still necessary before drafting a completed revision of the Regulation and that he envisaged to convene the first meeting of the informal group either in Moscow or in Geneva prior to the next GRSP session.

17. GRSP noted that OICA was conducting a worldwide study on truck accidents in order to determine the accident risks and their possible regulatory solutions, taking into account among others Regulation No. 29.

B.1.4. Regulation No. 44 (Child restraint systems)

Documentation: TRANS/WP.29/GRSP/2004/20; TRANS/WP.29/GRSP/2005/8; informal document No. GRSP-37-2 of Annex 1 to this report.

18. CLEPA withdrew TRANS/WP.29/GRSP/2004/20.

19. GRSP adopted TRANS/WP.29/GRSP/2005/8 with the amendments reproduced below. The secretariat was requested to transmit the adopted proposal to WP.29 and AC.1 for consideration at their November 2005 sessions as draft Supplement 8 to the 03 series of amendments to Regulation No. 44.

Paragraph 8.5., replace the words "the latest edition of ISO 6487." by "ISO 6487: 2002".

Annex 7, paragraph 3., replace the words "ISO 6487 latest edition" by "ISO 6487: 2002".

20. GRSP agreed on the need to clarify in the Regulation that a guide strap is not a child restraint system (CRS). For this purpose, the expert from Netherlands offered to update his proposal (GRSP-37-2) and to transmit it to the secretariat in due time for its distribution as an official document at the next GRSP session.

B.1.5. Regulation No. 94 (Frontal collision protection)

Documentation: TRANS/WP.29/GRSP/2004/8.

21. Awaiting WP.29's advice (TRANS/WP.29/1039, paras. 14 and 38), the proposal will be reconsidered at the next GRSP session. The expert from the EC informed GRSP that the process for the application of Regulations Nos. 94 and 95 by the European Community was still in progress.

B.1.6. Regulation No. 95 (Lateral collision protection)

Documentation: TRANS/WP.29/GRSP/2005/2.

22. GRSP adopted the proposal of TRANS/WP.29/GRSP/2005/2 and requested the secretariat to transmit it to WP.29 and AC.1 for consideration at their November 2005 session as draft Corrigendum 1 to the 02 series of amendments to Regulation No. 95 (French only).

23. The GRSP Chairman requested information about the status of the work for adopting the revised ES-2 dummy (ES-2re) into Regulation No. 95 to harmonize the test device used in Regulation No. 95 with that of the proposed United States of America side impact regulation. The expert from the Netherlands informed GRSP that the United States of America information on ES-2re was given to EEVC Working Group 12 and that they are considering this matter.

B.1.7. ACCELERATION TEST DEVICES

Documentation: TRANS/WP.29/GRSP/2001/2; TRANS/WP.29/GRSP/2002/15; TRANS/WP.29/GRSP/2003/16; TRANS/WP.29/GRSP/2004/24; TRANS/WP.29/GRSP/2004/25; TRANS/WP.29/GRSP/2005/5; TRANS/WP.29/GRSP/2005/6; informal documents Nos. GRSP-35-8, GRSP-37-10, GRSP-37-11, GRSP-37-12 and GRSP-37-23 of Annex 1 to the report of the May 2004 session and to this report.

24. GRSP noted that TRANS/WP.29/GRSP/2001/2, TRANS/WP.29/GRSP/2003/16, TRANS/WP.29/GRSP/2004/24, TRANS/WP.29/GRSP/2004/25 and GRSP-35-8 were superseded by the common proposals (TRANS/WP.29/GRSP/2005/5 and TRANS/WP.29/GRSP/2005/6) transmitted by the expert from France.

25. The expert from France presented the proposal for the inclusion of acceleration test devices into Regulation No. 16 (TRANS/WP.29/GRSP/2005/5); some prescriptions were still between square brackets for a GRSP decision. The expert from Japan introduced GRSP-37-11 amending the proposal. GRSP agreed to add at the end of paragraph 7.7.4.2. the following sentence, proposed by the expert from Netherlands:

Paragraph 7.7.4.2. add at the end:

"

However, if the above tests were performed at a higher speed and/or the acceleration curve have exceeded the upper level of the hatched area and the safety belt meets the requirements, the test shall be considered satisfactory."

26. The expert from Japan announced that, before defining his position about the proposal, his country would conduct additional tests without stopping distance calculation (see GRSP-37-10) and suggested to continue consideration of the proposal at the next GRSP session.

27. The GRSP Chairman suggested narrowing the first part of the corridor. Regarding the Conformity of Production (COP) prescriptions, the expert from Italy suggested that the COP tests should be conducted with the same type of device used for the type approval tests. GRSP agreed to continue consideration of the proposal at its next session.

28. Following the consideration of the proposals for amendments to Regulation No. 44 (TRANS/WP.29/GRSP/2005/6, GRSP-37-10, GRSP-37-12), the expert from the Netherlands tabled a consolidated proposal incorporating all the amendments agreed (GRSP-37-23). GRSP adopted TRANS/WP.29/GRSP/2005/6 with the amendments reproduced in Annex 3 to this report. The secretariat was requested to transmit the adopted proposal to WP.29 and AC.3 for consideration at

their November 2005 sessions as a part of draft Supplement 8 to the 03 series of amendments to Regulation No. 44 (see para. 19). The COP prescriptions will be considered at the December 2005 session (see para. 27).

29. Concerning the amendments to Regulation No. 17 (TRANS/WP.29/GRSP/2002/15), GRSP agreed to consider an updated proposal to be transmitted by the expert from Japan.

B.1.8. REGULATION No. 11 (Door latches and hinges)

Documentation: TRANS/WP.29/GRSP/2005/9; informal documents Nos. GRSP-37-3 and GRSP-37-7 of Annex 1 to this report.

30. The expert from the EC introduced the proposals of TRANS/WP.29/GRSP/2005/9 and GRSP-37-3 showing a possible way of incorporating adopted gtrs into Regulations. He added that WP.29's and AC.3's guidance were necessary. The experts from Canada and Japan supported this approach. The expert from OICA (GRSP-37-7) reminded GRSP that this issue was on the WP.29 agenda of June 2005 and recommended to await WP.29's and AC.3's decision. GRSP agreed to postpone the consideration of this subject to its next session.

B.2. NEW DRAFT REGULATIONS

B.2.1. New draft Regulation on partitioning systems

Documentation: TRANS/WP.29/GRSP/2004/19 and Amend.1.

31. GRSP adopted the proposals as amended in Annex 4 to this report. GRSP requested the secretariat to transmit the draft Regulation to WP.29 and AC.1 for consideration at their November 2005 sessions.

C. BUSES AND COACHES

C.1. Frontal collision of buses and coaches

32. The expert from Italy informed GRSP that the latest information on the progress of work by the GRSG group of experts was available in informal document GRSG-88-10. The Chairman suggested to keep this issue on the agenda as an exchange of information.

C.2. Restraining of children travelling in buses and coaches

Documentation: TRANS/WP.29/GRSP/2004/5; informal document No. GRSP-37-20 of Annex 1 to this report.

33. GRSP noted the summary research of the United Kingdom on the issue of wearing adult belts on minibuses and coaches by children under the age of three (GRSP-37-20). The expert from Italy recalled that the objective of TRANS/WP.29/GRSP/2004/5 was to obtain the GRSP technical advice in order to guarantee adequate safety to children wearing safety-belts designed for adults. The expert from France informed GRSP that his country and the EEVC Working Group 18 were working on the subject and would announce a preliminary set of recommendations for the next GRSP session.

C.3. Safety of wheelchair users in buses and coaches

34. No additional information was provided.

D. OTHER BUSINESS

D.1. Exchange of information on national and international requirements on passive safety

35. The expert from the United States of America volunteered to provide information on the revised ES-2 dummy and on the status of the development of the 10-year-old dummy.

D.2. Clarification of the scope of Regulations annexed to the 1958 Agreement covered by GRSP

Documentation: Informal documents Nos. GRSP-36-8 and GRSP-37-5 of Annex 1 to the previous and present report.

36. Recalling the European Commission's declaration made at the WP.29 November 2004 session (TRANS/WP.29/1037, para.11) on the EC intention to accelerate the migration of the European Union regulatory system towards the Regulations annexed to the 1958 Agreement and to the gtrs under the 1998 Agreement, the expert from the EC introduced GRSP-37-5 with details of how to solve uncertainties and errors in the scope of Regulations. GRSP made a general review of the document. Taking into consideration the comments received, the expert from the EC was requested to present concrete proposals regarding the scope of Regulations for consideration at the next session.

D.3. DRAFT REGULATION ON REPLACEMENT SEATS AND SEAT COVERS

Documentation: Informal document No. GRSP-37-8 of Annex 1 to this report.

37. The expert from Germany presented GRSP-37-8, highlighting the possible incompatibility of the use of replacement seats and seat covers on seats fitted with airbags. GRSP experts were requested to consider this issue and to be ready to express, at the next session, their views on the necessity of developing a new Regulation annexed to the 1958 Agreement. The expert from Poland was in favour of such a Regulation.

D.4. WORLD-WIDE HARMONIZED HEAVY-DUTY ON-BOARD DIAGNOSTIC SYSTEM (WWH-OBD)

Documentation: Informal document No. GRSP-37-1 of Annex 1 to this report.

38. GRSP followed a presentation by the Secretary of the GRPE informal group dealing with the subject (GRSP-37-1). Interested GRSP experts were invited to attend the informal GRPE meeting, scheduled on 30 May 2005 in Geneva, aiming to finalize the generic part of the draft gtr on OBD, enabling the eventual future extension of the OBD system to other functions.

D.5. TRIBUTE TO Mr. S. YAMAGISHI

39. Learning that Mr. S. Yamagishi would no longer attend GRSP sessions because of his new responsibilities, GRSP acknowledged his fruitful contribution to the development of GRSP work and honoured him with a long applause.

AGENDA FOR THE NEXT SESSION

40. For its thirty-eighth session, to be held in Geneva from 6 (2.30 p.m.) to 9 (12.30 p.m.) December 2005, GRSP agreed that the Chairman, in collaboration with the secretariat, would prepare the provisional agenda. 1/

1/ As part of the secretariat's efforts to reduce expenditure, all the official documents, as well as the informal documents, distributed prior to the session by mail or posted to the WP.29 website 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. With regard to the translated official documents, experts can now access the new public Official Documents System (ODS) at the website Address: <http://documents.un.org>

Annex 1

LIST OF INFORMAL DOCUMENTS DISTRIBUTED DURING THE SESSION
(GRSP-37-...)

No.	Transmitted By	Agenda item	Language	Title	Follow-up
1.	WWH-OBD	D.4	E	Diesel Heavy Duty emission related OBD - A module within a more generic GTR	(a)
2.	Netherlands	B.1.4	E	Proposal for draft amendments to Regulation No. 44 (Child restraints)	(b)
3.	European Commission	B.1.8	E	Proposal for draft amendments to Regulation No. 11 (Door latches and door retention components) - Corrigendum to document TRANS/WP.29/GRSP/2005/9	(b)
4.	ISO	A.5	E	WorldSID 50th percentile male side-impact dummy	(a)
5.	European Commission	D.2	E	Proposal for clarification of the scope of regulations under the 1958 Agreement covered by GRSP	(a)
6.	OICA	B.1.1	E	Regulation No. 14 - Safety belt anchorages N2 and N3 vehicles	(a)
7.	OICA	B.1.8	E	Amendments to UNECE Regulation No. 11 - Comments to TRANS/WP.29/GRSP/2005/9 and GRSP-37-3	(a)
8.	Germany	D.3	E	New UNECE Regulations for accessory and replacement equipments	(c)
9.	Japan	B.1.1	E	Proposal for draft amendments to Regulation No. 14 (Safety-belt anchorages)	(b)
10.	Japan	B.1.7	E	Japan's comment on TRANS/WP.29/GRSP/2005/6 UNECE Regulation No. 44, TRANS/WP.29/GRSP/2005/5 UNECE Regulation No. 16	(a)

No.	Transmitted By	Agenda item	Language	Title	Follow-up
11.	Japan	B.1.7	E	Draft amendments to TRANS/WP.29/GRSP/2005/5 (Draft amendment to Regulation No. 16)	(b)
12.	Japan	B.1.7	E	Draft amendments to TRANS/WP.29/GRSP/2005/6 (Draft amendment to Regulation No. 44)	(a)
13.	France	B.1.2	E/F	Proposal for draft amendments to Regulation No. 16 (Safety belts)	(b)
14.	CLEPA	B.1.1	E	Draft corrigendum to UNECE Regulation No. 14 (Anchorages of safety belts)	(a)
15.	Japan	A.1	E	Japan's comment to TRANS/WP.29/GRSP/2005/3	(a)
16.	Japan	A.1	E	Flex-PLI Technical Evaluation Group (Flex-PLI TEG) Activities	(a)
17.	United States of America	A.3	E	Proposal for draft amendments to GTR 1 (Door latches and door retention components)	(b)
18.	United States of America	A.1	E	United States of America comments on draft global technical regulation on pedestrian head and leg protection (TRANS/WP.29/GRSP/2005/3)	(a)
19.	United States of America	A.2	E	UN/ECE/WP.29/GRSP Informal Group on Head Restraints - 1st Progress Report	(a)
20.	United Kingdom	C.2	E	Restraining of Children Travelling in Buses and Coaches - Summary of United Kingdom's research on wearing of adult belts on minibuses and coaches by children under 3	(a)
21.	WorldSID Group	Task A.5	E	WorldSID Update	(a)
22.	Germany	B.1.2	E	Proposal for draft amendments to Regulation No. 16 (Draft amendment to TRANS/WP.28/GRSP/2005/7/Corr.1)	(d)

No.	Transmitted By	Agenda item	Language	Title	Follow- up
23.	Netherlands	B.1.7	E	Proposal for draft amendments to Regulation No. 44 (Child restraints)	(d)

Notes:

- (a) Consideration completed or superseded
- (b) Continue consideration at the next session with an official symbol
- (c) Continue consideration at the next session as informal document
- (d) Adopted

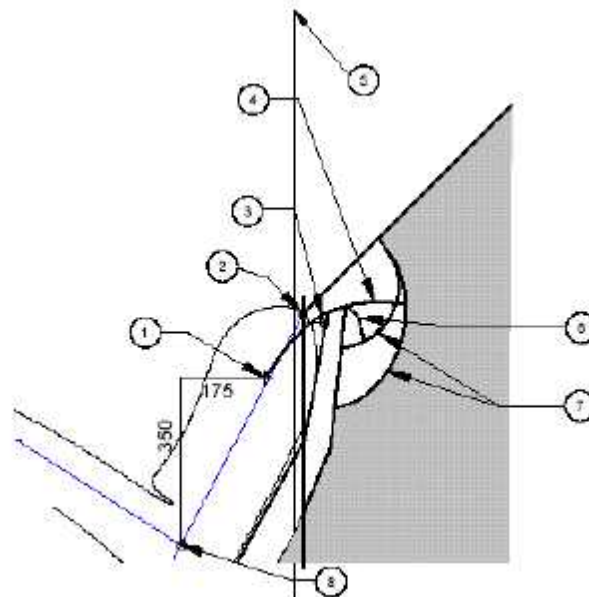
Annex 2

AMENDMENTS TO REGULATION No. 14 ADOPTED BY GRSP AT ITS
THIRTY-SEVENTH SESSION
(see paragraph 10. of this report)

Annex 9, Figure 7,

For the existing figure substitute

"



Key

- 1 "V" point
- 2 "R" point
- 3 "W" point
- 4 Strap wrap-around length from "V" point: 250 mm
- 5 Vertical longitudinal plane
- 6 Strap wrap-around length from "W" point: 200 mm
- 7 Arcs created by wrap-around lengths
- 8 H-point

- NOTE 1 Portion of top tether anchorage that is designed to bind with the top tether hook to be located within shaded zone
- NOTE 2 "R" point: Shoulder reference point
- NOTE 3 "V" point: V-reference point, 350 mm vertically above and 175 mm horizontally back from H-point
- NOTE 4 "W" point: W-reference point, 50 mm vertically below and 50 mm horizontally back from "R" point
- NOTE 5 "M" plane: M-reference plane, 1000 mm horizontally back from "R" point
- NOTE 6 The forwardmost surfaces of the zone are generated by sweeping the two wraparound lines throughout their extended range in the front part of the zone. The wraparound lines represent the minimum adjusted length of typical top tether straps extending from either the top of the CRS (W-point), or lower on the back of the CRS (V-point).

Figure 7: ISOFIX Top tether anchorage location, ISOFIX zone - Enlarged side view of wrap-around area"

Annex 3

AMENDMENTS TO DOCUMENT TRANS/WP.29/GRSP/2005/6
ADOPTED BY GRSP AT ITS THIRTY-SEVENTH SESSION
(see paragraph 28. of this report)

Through the text, delete the square brackets.

Paragraph 8.1.3.1.1.3.1., amend to read:

" in paragraph 8.1.3.4. and hereafter specified:

Calibration procedure:

The deceleration curve

If necessary of 200 kg by an additional inert mass of 28 kg

The trolley

Paragraph 8.1.3.1.1.3.2., amend to read:

"8.1.3.1.1.3.2. Acceleration test device

Dynamic testing conditions:

For frontal impact, the trolley shall be so propelled that, during the test, its total velocity change ΔV is 52^{+0}_{-2} km/h and its acceleration curve is within the hatched area of the graph in Annex 7 Appendix 1 and stay above the segment defined by the coordinates (5g, 10ms) and (9g, 20ms). The start of the impact (T0) is defined, according to ISO DIS 17 373 for a level of acceleration of 0.5 g.

For rear impact, the trolley shall be so propelled that, during the test, its total velocity change ΔV is 32^{+2}_{-0} km/h and its acceleration curve is within the hatched area of the graph in Annex 7 Appendix 2 and stay above the segment defined by the coordinates (5g, 5ms) and (10g, 10ms). The start of the impact (T0) is defined, according to ISO DIS 17 373 for a level of acceleration of 0.5 g.

Despite the fulfilment of the above requirements, the technical service shall use a mass of trolley (equipped with its seat), as specified in paragraph 1. of Annex 6, superior to 380 kg.

However, if the tests above were performed at a higher speed and/or the acceleration curve has exceeded the upper level of the hatched area and the child restraint meets the requirements, the test shall be considered satisfactory."

Paragraph 8.1.3.1.1.4.2., amend to read:

"8.1.3.1.1.4.2. the stopping distance (only for deceleration sleds), which may be calculated by double integration of the recorded sled deceleration,"

Paragraph 8.1.3.2.1.6.2., amend to read:

"8.1.3.2.1.6.2. the stopping distance (only for deceleration sleds), which may be calculated by double integration of the recorded sled deceleration."

Annex 1, item 9, insert at the end a reference to footnote 2/.

Annex 7, amend to read:

"Annex 7

CURVE OF TROLLEY'S DECELERATION OR ACCELERATION,
AS FUNCTION OF TIME

In all cases the calibration and measuring procedures shall correspond to those defined in the International Standard ISO 6487: 2002; the measuring equipment shall correspond to the specification of a data channel with a channel frequency class (CFC) 60."

Annex 7, Appendices 1 and 2, the figures, the hatched area applies only to the area inside the two lines. In the square defining the lines, the low line shall be indicated by " -·-·- ". Add after the figures the following sentence:

"The additional segment (see paragraph 8.1.3.1.1.3.2.) applies only for acceleration sled"

Annex 4

AMENDMENTS TO DOCUMENTS TRANS/WP.29/GRSP/2004/19 and Amend.1
ADOPTED BY GRSP AT ITS THIRTY-SEVENTH SESSION
(see paragraph 31. of this report)

Paragraph 1., amend to read:

" of category M₁ 1/, supplied" "

Paragraph 2.1., amend to read:

"2.1. "Partitioning System" means parts or devices which in addition to the seat backs, are intended to protect occupants from displaced luggage."

Paragraph 2.3., amend to read:

" design and characteristics of the partitioning systems."

Paragraph 2.4.3.,

For manufacturer read applicant for the approval.

Paragraph 2.5., amend to read:

"2.5. "Seat": see paragraphs 2.3. and 2.4. of Regulation No. 17."

Paragraph 2.7., amend to read:

"2.7. "Adjustment system" means the device by which the partitioning system or its parts can be adjusted to a position suited to the installation as recommended by the applicant for the approval in the prescribed vehicle(s) and position(s) within said vehicle(s)."

Paragraph 5.4.1., footnote 1/, amend to read:

"1/ 1 for Germany,, 50 for Malta and 51 for the Republic of Korea. Subsequent "

Paragraph 5.4.2., amend to read:

"5.4.2. the approval number, to the right of the circle prescribed in paragraph 5.4.1."

Paragraph 5.6., amend to read:

"5.6. The approval mark shall be affixed on the partitioning system by the manufacturer."

Paragraph 5.7.,

For Annex 1 read Annex 2.

Paragraph 6.1., amend to read:

"

Partitioning systems which according to paragraph 3.2.1. may be used in more than one vehicle or may be used in more than one prescribed position within a specified vehicle must conform to the tests prescribed in Annex 3 in all prescribed vehicles and positions."

Paragraph 6.2.2.,

For a frontal impact read an impact.

Paragraph 7.2., amend to read:

"7.2. The competent authority which granted type approval may at any time verify the conformity control methods applied for each production unit. The normal frequency of these verifications shall be once a year. The authority may also carry out random checks on serially-manufactured partitioning systems in respect to the requirements set out in paragraph 6. above."

Paragraph 8.1.,

For 8.1. and 8. read 6.

Paragraph 9.1.2.,

For 6.1. read 6.

Paragraph 10.1., delete the paragraph number (the text remains as a part of paragraph 10.).

Paragraph 11.1., delete the paragraph number (the text remains).

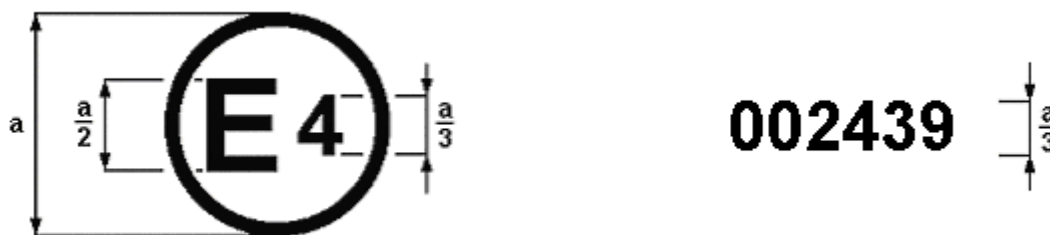
Paragraph 11.2. (former), renumber as paragraph 11.1., and amend to read:

"11.1. Installation instructions which specify for which vehicle type(s) the assembly "

Paragraph 11.3. (former), renumber as paragraph 11.2.

Annex 2, the marking, amend to read:

"



a = 8 mm min."

Annex 3,

Through the entire annex, delete "substantially"

Paragraph 2.1., amend to read:

"2.1. The partitioning system must be attached to a rigid frame with the attachment hardware supplied by the manufacturer. The rigid frame must incorporate a rigid horizontal plane "E" (see Annex 4) which replicates the general level of the vehicle luggage area floor. The attachment points A, B, C and D should replicate the geometry of the intended vehicle anchorage points as specified in paragraph 3.2.2. of this Regulation, measured from the datum plane "E".

If there are different installation locations within a vehicle type recommended by the applicant for approval, the worst case position has to be chosen in agreement with the technical service.

All attachment straps, intermediate structures and hardware, etc. should be fitted in accordance with the manufacturer's instructions."

Paragraph 2.2., amend to read:

" in paragraph 3.2.2. of this Regulation."

Paragraph 2.3.1., amend to read:

" a horizontal distance of 200 mm. In this position they have to be secured against any backward movement. If in the prescribed vehicle installation described in paragraph 3.2.2. of this Regulation, it would not be possible to move the two type 1 blocks "

Paragraphs 2.3.2., 2.3.3. and 2.6.,

For paragraph 3.2.2. in the application for approval read paragraph 3.2.2. of this Regulation.

Paragraph 3., amend to read:

- "3. The test frame and its attachments prescribed in paragraphs 2.1., 2.2., 2.3.1.,2.3.3., 2.4., 2.6. and 2.7. shall be attached securely to a test sled which shall be decelerated from an initial velocity to standstill such that the sled and its attached frame is subjected to deceleration falling within the bounds of the corridor specified graphically in Appendix 1 to Annex 3.

Annex 3, Appendix 1, amend the title to read:

"SLED DECELERATION CORRIDOR AS A FUNCTION OF TIME
(Frontal impact)"

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