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**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-FIFTH SESSION

(3-7 May 2004)

1. GRSP held its thirty-fifth session from 3 May (afternoon) to 7 May 2004 under the chairpersonship of Ms. J. Abraham (United States of America). Delegates from the following countries participated in the work following Rule 1(a) of the Rules of Procedure of WP.29 (TRANS/WP.29/690): Australia; Belgium; 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. Representatives from the following non-governmental organizations participated: International Organization of Motor Vehicle Manufacturers (OICA); European Association of Automotive Suppliers (CLEPA); Consumers International (CI); and European Enhanced Vehicle Safety Committee (EEVC).

2. 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: Informal document No. GRSP-35-4 of annex 1 to this report.

3. The Chairman of the informal group introduced informal document No. GRSP-35-4. GRSP thanked the informal group for its efforts to date. Experts were invited to comment on the document. The Chairman of the informal group stated that they would complete feasibility studies for the gtr requirements during the summer and hold a meeting in September to discuss the results and continue drafting the gtr, to be transmitted for consideration at the December 2004 GRSP session.

A.2. Draft global technical regulation on lower anchorages and tethers for child restraints systems

Documentation: Informal document No. GRSP-35-19 of annex 1 to this report.

4. The expert from CLEPA gave a presentation on child restraints exposed to side impact crash tests (informal document No. GRSP-35-19). He presented a comparison of the rigid and flexible lower anchorages systems and discussed ease of use. No data was presented to indicate that the benefits received by using rigid attachments would justify the cost.

5. No comments were presented responding to the reasons and details for the 15 kN tether anchorage force provided by the United States of America at the thirty-fourth session of GRSP and no reasons or details were provided for the establishment of the 8 kN tether anchorage force required in the UNECE regulation. The discussion on the development of this gtr will be resumed at the next session, taking into account the comparison already made by the delegate from the United States of America between the requirements of Regulations Nos. 14, 16 and 44 and the standards of his country and Canada (informal document No. 12 of the thirty-fourth session which will be distributed with an official symbol).

A.3. Draft global technical regulation on door lock and door retention components

Documentation: TRANS/WP.29/GRSP/2004/9; TRANS/WP.29/GRSP/2004/9/Corr.1; informal documents Nos. GRSP-35-14 and GRSP-35-21 of annex 1 to this report.

6. After having expressed its thanks to the informal working group for its excellent work, GRSP considered and adopted, with amendments, the text of informal document No. GRSP-35-14 (superseding TRANS/WP.29/GRSP/2004/9 and TRANS/WP.29/GRSP/2004/9/Corr.1). All outstanding issues of applicability and the combination load test were resolved during the meeting. Regarding the applicability, it was agreed that it would apply to all Category 1-1 and Category 2 vehicles, with the understanding as stated in the preamble of the draft gtr that if a jurisdiction determines that its domestic regulatory scheme is such that full applicability is inappropriate, it may limit domestic regulation to appropriate vehicles. Regarding the combination test procedure, GRSP decided to continue to review work in this area and noted that any resolution would be handled as a future amendment.

7. The revised text, together with the third Progress Report of the informal working group (informal document No. GRSP-35-21), was distributed at the end of the session by the expert from the United States of America for comments. Experts were allowed to submit only editorial comments, up to two weeks after the end of the session.

8. The Chairman of the informal working group informed that he would take into consideration the comments and send to the secretariat the finalized version of the draft gtr. The updated document would be transmitted to WP.29 and AC.3, as an informal document, for preliminary consideration at their June 2004 sessions and for final adoption at their November 2004 sessions. The secretariat was requested to transmit also the third progress report to WP.29 and AC.3 for consideration as an informal document at their June 2004 sessions.

A.4. Draft global technical regulation on head restraints

9. GRSP agreed to resume the consideration of this subject at its next session. The secretariat was requested to distribute informal document No. 17 of the thirty-fourth session with an official symbol.

A.5. Exchange of views on side impact dummy

10. GRSP agreed to proceed to this exchange of views at its next session.

A.6. Exchange of news on vehicle crash compatibility

Documentation: Informal documents Nos. GRSP-35-9 and GRSP-35-20 of annex 1 to this report.

11. The delegate from Japan gave a presentation on compatibility research (informal document No. GRSP-35-9) in his country. The expert from EEVC gave a presentation on side impact tests (informal document No. GRSP-35-20).

**B. 1958 AGREEMENT**

B.1. Amendments to Regulations

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

Documentation: TRANS/WP.29/931; TRANS/WP.290/GRSP/2003/12; TRANS/WP.29/GRSP/2004/1; TRANS/WP.29/GRSP/2004/2; informal documents Nos. WP.29-32-11; GRSP-35-5; GRSP-35-10; GRSP-35-11 and GRSP-35-17 of annex 1 to this report.

12. GRSP had an exchange of views on document TRANS/WP.29/GRSP/2004/1 and on informal document No. GRSP-35-17. No decision having been taken, the discussion will be resumed at the next session. The secretariat was requested to distribute informal document No. WP.29-132-11 with an official symbol, for consideration at the next session.

13. To the amendments already adopted regarding document TRANS/WP.29/GRSP/2003/12 (TRANS/WP.29/GRSP/34, annex 2), the following additional modifications were agreed:

Paragraph 6.3.3., amend to read:

".... load application time of 60 seconds."

Paragraph 6.3.4., amend to read:

".... over the device and pulled tight. No preload beyond the minimum necessary for correct positioning shall be introduced ... the traction device of either 254 mm or ..."

14. The proposal of informal document No. GRSP-35-10 was included in the amendments adopted. The secretariat was requested to transmit the modified proposal to WP.29 and AC.1 for consideration at their 2004 November session as draft Supplement 1 to the 06 series of amendments to Regulation No. 14.

15. Document TRANS/WP.29/GRSP/2004/2 was considered and adopted. The proposal will be transmitted to WP.29 and AC.1 for consideration at their November 2004 sessions as draft Corrigendum 1 to Supplement 4 to the 05 series of amendments to Regulation No. 14.

16. Informal document No. GRSP-35-5 was considered and adopted as reproduced in annex 2 to this report. The secretariat was requested to transmit the proposal to WP.29 and AC.1 for consideration at their November 2004 sessions, as Corrigendum 1 to the 06 series of amendments to Regulation No. 14.

17. The consideration of informal document No. GRSP-35-11 was deferred to the next session. The secretariat was requested to distribute it with an official symbol. GRSP experts were requested to send their comments on the proposal to the expert from CLEPA.

B.1.2. Regulation No. 17 (Strength of seats)

Documentation: Informal documents Nos. GRSP-35-2 and GRSP-35-12 of annex 1 to this report.

18. GRSP had an exchange of views on informal documents Nos. GRSP-35-2 and GRSP-5-12.

20. The expert from Consumers' International announced statistical data and a proposal for the next session.

21. The general opinion of GRSP experts was that, before considering any proposal of Consumers International on the protection of the occupants against the displacement of luggage, more statistical data would be necessary on accidents caused by luggage displacement.

22. The expert from Germany informed GRSP on the relevant accident data collected in his country. He was requested to make them available for GRSP.

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

23. The delegate from the Russian Federation, Chairman of the informal group, announced that the informal group had resumed its work and that a progress report would be transmitted for the next session.

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

Documentation: TRANS/WP.29/GRSP/2003/5; TRANS/WP.29/GRSP/2004/3;  
TRANS/WP.29/GRSP/2004/4; TRANS/WP.29/GRSP/2004/6;  
TRANS/WP.29/GRSP/2004/6/Corr.1; TRANS/WP.29/GRSP/2004/10;  
TRANS/WP.29/GRSP/2004/12; TRANS/WP.29/GRSP/2004/13.

24. GRSP considered and adopted documents TRANS/WP.29/GRSP/2004/3, TRANS/WP.29/GRSP/2004/4 (superseding document TRANS/WP.29/GRSP/2003/5); TRANS/WP.29/GRSP/2004/12 and TRANS/WP.29/GRSP/2004/13 as amended. The adopted texts are reproduced in annex 3 to this report. The secretariat was requested to transmit them to WP.29 and AC.1 for consideration at their November 2004 session as a proposal for draft Supplement 7 to the 03 series of amendments to Regulation No. 44.

25. The second sentence of the proposal in document TRANS/WP.29/GRSP/2004/3 and the proposal for paragraph 7.1.4.1.10.1.2. in document TRANS/WP.29/GRSP/2004/12, left pending, will be reconsidered at the next session. The secretariat will distribute them in a consolidated proposal.

26. GRSP also considered and adopted with amendments documents TRANS/WP.29/GRSP/2004/6 and TRANS/WP.29/GRSP/2004/6/Corr.1. The adopted text is reproduced in annex 4 to this report. The secretariat was requested to transmit it to WP.29 and AC.1 for consideration at their November 2004 session as a proposal for a draft 04 series of amendments to Regulation No. 44.

27. GRSG considered and adopted the proposed corrections to paragraph 2.1.3. and 6.1.3. (TRANS/WP.29/GRSP/2004/10). The adopted texts are reproduced in annex 5 to this report. The secretariat was requested to transmit them to WP.29 and AC.1 for consideration at their November 2004 session as draft Corrigendum 2 to Supplement 5 to the 03 series of amendments to Regulation No. 44.

B.1.5. Regulation No. 16 (Safety-belts)

Documentation: Informal documents Nos. GRSP-35-1 and GRSP-35-6 of annex 1 to this report.

28. GRSP noted the corrections of informal document No. GRSP-35-1 to document TRANS/WP.29/963. The secretariat announced that Corrigendum 1 to Supplement 15 to the 04 series of amendments to Regulation No. 16 would contain these corrections.

29. GRSP also adopted the following correction to the text of Regulation No. 16 (informal document No. GRSP-35-6):

Paragraphs 2.28. to 2.37., should be renumbered as paragraphs 2.29. to 2.38.

30. It will be transmitted to WP.29 and AC.1 for consideration at their November 2004 session as proposal for draft Corrigendum 2 to Supplement 15 to the 04 series of amendments.

B.1.6. Frontal collision of buses and coaches

Documentation: Informal document No. GRSP-35-16.

31. GRSP noted informal document No. GRSP-35-16, transmitted by the delegate from Spain, containing information on the work of GRSG experts on frontal collision of buses and coaches. The announcement of the participation of the GRSG delegate from Spain at the next GRSP session was welcomed.

B.2. ACCELERATION TEST DEVICES

Documentation: TRANS/WP.29/GRSP/2000/3/Rev.1; TRANS/WP.29/GRSP/2000/12; TRANS/WP.29/GRSP/2001/2; TRANS/WP.29/GRSP/2002/15; TRANS/WP.29/GRSP/2003/16; informal documents Nos. GRSP-35-8 and GRSP-35-15 of annex 1 to this report.

32. An exchange of views on the different proposals was initiated but could not be finished and will be resumed at the next session.

33. The secretariat was requested to distribute informal document No. GRSP-35-15, after its revision by the delegate from the Netherlands, with an official symbol for consideration at the next session.

B.3. RESTRAINING OF CHILDREN TRAVELLING IN BUSES AND COACHES

Documentation: TRANS/WP.29/GRSP/2004/5 and informal document No. GRSP-35-13 of annex 1 to this report.

34. GRSP noted the documents transmitted by the delegates from Italy (TRANS/WP.29/GRSP/2004/5) and the United Kingdom (informal document No. GRSP-35-13) containing information on existing legislation and on research results in this field. Their discussion was deferred to the next session.

B.4. OTHER BUSINESS

B.4.1. Consideration of draft Rule No. 2 to be annexed to the 1997 Agreement

Documentation: TRANS/WP.29/2004/24; TRANS/WP.29/2004/44 and TRANS/WP.29/2004/47.

35. GRSP noted the amendments already proposed to the draft and invited its experts to make their comments on the draft and on the proposed amendments as well.

B.4.2. Exchange of information on national and international requirements on passive safety

36. No new information was transmitted to GRSP.

B.4.3. New draft Regulation on partitioning systems

Documentation: Informal document No. GRSP-35-3 of annex 1 to this report.

37. The expert from CLEPA introduced the document. The secretariat was requested to distribute it with an official symbol for consideration at the next session.

B.4.4. Regulation No. 94 (Frontal collision protection)

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

38. The proposal of the delegate from Japan (TRANS/WP.29/GRSP/2004/8) will be considered at the next session.

B.4.5. Draft Consolidated Resolution on Common Definitions (R.E.5)

Documentation: TRANS/WP.29/2004/25.

39. GRSP had an exchange of views on document TRANS/WP.29/2004/25. The Chairwoman will inform WP.29 on the agreement of GRSP with the draft proposal.

B.4.6. Regulation No. 22 (Protective helmets)

Documentation: Informal document No. GRSP-35-7 of annex 1 to this report.

40. The interpretation problem raised by the delegate from Poland (informal document No. GRSP-35-7) will be clarified out of the session by the competent delegates and experts.

B.4.7. Safety belt reminder

Documentation: Informal document No. GRSP-35-18 of annex 1 to this report.

41. The delegate from France introduced informal document No. GRSP-35-18 summarizing the concept of a proposal on this subject which will be transmitted for the next session. The Chairwoman will contact the Chairman of GRSG in order to consider the possibility that this issue could be examined by GRSP and not by GRSG.

AGENDA FOR THE NEXT SESSION

42. Due to the lack of time, GRSP did not consider the provisional agenda of the thirty-sixth session, scheduled to be held in Geneva, from 7 (p.m.) to 10 (a.m.) December 2004. It was agreed that the Chairperson, jointly with the secretariat would prepare a draft agenda. 1/

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1/ As part of the secretariat's efforts to reduce expenditure, all the official 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 and experts are kindly requested to bring their copies of documents to the meeting.

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Annex 1LIST OF INFORMAL DOCUMENTS DISTRIBUTED DURING THE SESSION  
(GRSP-35-...)

No	Transmitted by	Agenda item	Language	Title	Follow-up
1.	Secretariat	B.1.5.	E	Correction of figures of Regulation No. 16	(a)
2.	Consumers International	B.1.2.	E	Proposal for draft amendments to Regulation No. 17 (Strength of Seats)	(a)
3.	CLEPA	B.4.3.	E	Draft Regulation No. XX - Uniform Provisions Concerning the Approval of Partitioning Systems to Protect Passengers against Displaced Luggage, Supplied as Non Original Vehicle Equipment	(b)
4.	Informal Group	A.1.	E	UN/ECE/WP.29/GRSP Pedestrian Safety gtr Informal Group 2nd Interim Report	(e)
5.	Italy	B.1.1.	E	Proposal for Draft Corrigendum to Regulation No. 14	(d, e)
6.	Italy	B.1.5.	E	Redactional Amendments to document TRANS/WP.29/932 (Draft Supplement 15 to the 04 Series of Amendments to Regulation No. 16 – Safety Belts – ISOFIX)	(d, e)
7.	Poland	B.4.6.	E	Regulation No. 22 interpretation needed	(a)
8.	Germany	B.2.	E	Proposal of Velocity for the Acceleration Sled in Regulation No. 16	(a)
9.	Japan	A.6.	E	Japan Compatibility Research	(a)
10.	Japan	B.1.1.	E	Clarification of the Seatbelt Anchorage Test Method	(d)
11.	CLEPA	B.1.1.	E	Proposed Amendments to Series 6 of Regulation No. 14 – Safety Belt Anchorages, ISOFIX Anchorages Systems and ISOFIX Top Tether Anchorages	(b)
12.	OICA	B.1.2.	E	Regulation No. 17 – Protection of Occupants	(a)

No	Transmitted by	Agenda item	Language	Title	Follow-up
				Against Luggage Displacement	
13.	United Kingdom	B.3.	E	Seatbelts: Requirements for Minibuses and Coaches	(a)
14.	United States of America	A.3.	E	Proposal for a Global Technical Regulation on Door Locks and Door Retention Components	(d, e)
15.	Netherlands	B.2.	E	Proposal for Draft Amendments to Regulation No. 16 – Acceleration (and deceleration) Test Devices	(b)
16.	Spain	B.1.6.	E	Frontal Collision of Buses and Coaches	(a)
17.	Spain	B.1.1.	E	Proposal for Draft Amendments to Regulation No. 14	(c)
18.	France	B.4.7.	E/F	Proposal concerning the technical requirements for Safety-belt reminder	(a)
19.	CLEPA	A.2	E	Side impact and ease of use. Comparison between ISOFIX and latch.	(a)
20.	EEVC WG 13	A.6	E	Overview of the current research of EEVCWG13. Side impact	(a)
21	United States of America	A.3	E	UN/ECE/WP.29/GRSP informal group on door lock and door retention components. 3d Progress Report	(e)

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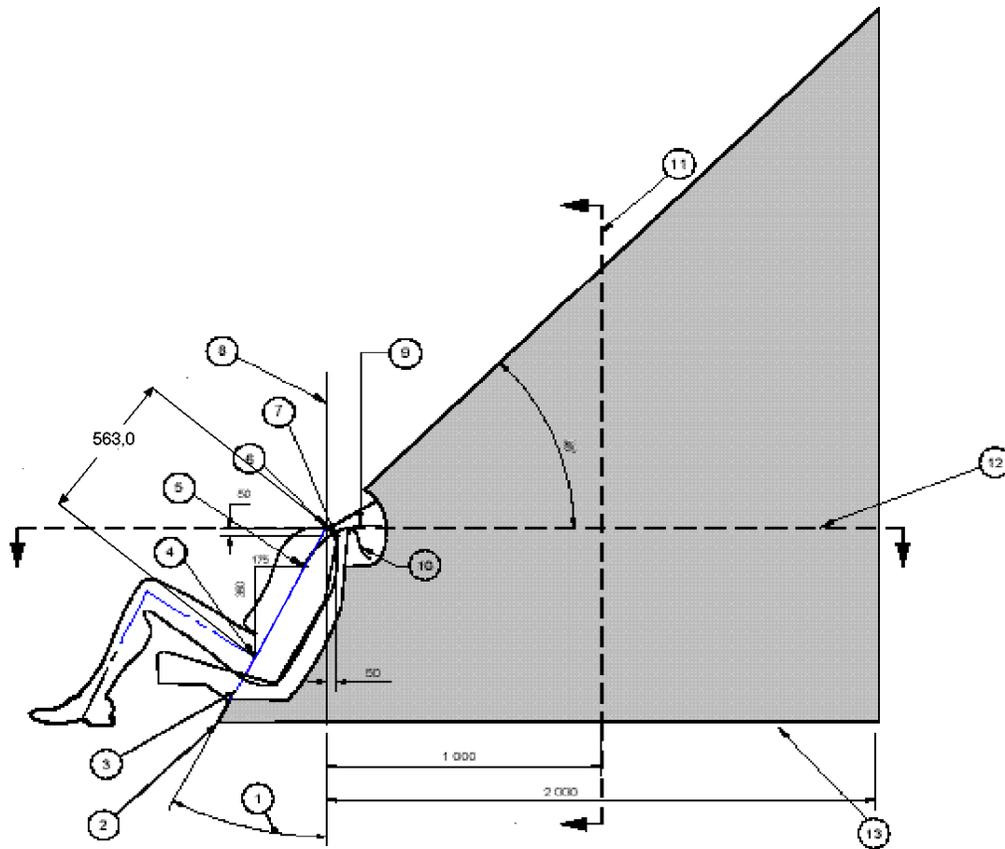
Notes:

- (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
  - (e) To be transmitted for consideration to WP.29/AC.1/AC.3
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Annex 2

PROPOSAL FOR DRAFT CORRIGENDUM 1 TO THE 06 SERIES OF AMENDMENTS TO  
REGULATION No. 14  
(Safety-belt anchorages)  
(see para. 16 of this report)

Insert a new dimensioning of 563.0 mm in figure 6 between R point and H point as indicated below:



Annex 3

DRAFT SUPPLEMENT 7 TO THE 03 SERIES OF AMENDMENTS TO  
REGULATION No. 44  
(Child restraint systems)  
(see para. 24 of this report)

Paragraph 6.2.4.1., amend to read: 1/

"6.2.4.1. Y-shaped belts may only be used in rearward facing and lateral facing child restraint systems (carrycots). "

Paragraph 7.1.4.1.9., amend to read: 3/

"7.1.4.1.9. A child restraint with a support leg shall be tested as follows:

- a) In the case of semi-universal category, the tests for frontal impact shall be conducted with the support leg adjusted to both its maximum and minimum adjustment compatible with the positioning of the trolley floor pan. The tests for rearward impact shall be conducted with the worst case position selected by the Technical Service. During the tests the support leg shall be supported by the trolley floor pan as described in annex 6, appendix 3, figure 2. If there is clearance between the shortest leg length and the highest floor pan level, the leg is adjusted to the floor pan level of 140 mm below Cr. If the maximum leg length is more than the lowest floor pan level would allow to be used, the leg is adjusted to that lowest floor pan level of 280 mm below Cr. In the case of a support leg with adjustable steps, the support leg length shall be adjusted to the next adjustment position, in order to ensure the support leg is in contact with the floor.
- b) in the case... "

Insert new paragraph 8.1.3.5.6., to read: 4/

"8.1.3.5.6. For carry cots utilizing additional straps that are attached to two adult safety belts, where the load path shall apply directly through the adult safety belt to the adult safety belt lower anchorage, the anchorage on the test trolley shall be as prescribed in annex 6, appendix 3, paragraph 7 (A1, B1). Installation on the test bench shall be as described in annex 21, note 5. This system must work correctly even with the adult safety belts unlocked, and is considered as Universal when complying with paragraph 6.1.8."

Paragraph 8.1.3.7.9., amend to read: 3/

"8.1.3.7.9. The test specified in paragraph 7.1.4.1.10.1.2. need only be carried out with the largest manikin for which the child restraint is designed."

Paragraphs 8.4. to 8.4.1.2., amend to read: 2/

"8.4.           Registration of dynamic behavior

8.4.1.           In order to determine the behaviour of the manikin and its displacements, all dynamic tests shall be registered according to the following conditions:

8.4.1.1.        Filming and recording conditions:

- the frequency shall be at least 500 frames per second;
- the test shall be recorded on cine film, video or digital data carrier;

8.4.1.2.        Estimation of uncertainty:

Testing laboratories shall have and shall apply procedures for estimating uncertainty of measurement of the displacement of the manikin's head. The uncertainty shall be within +/- 25 mm.

Examples of international standards of such procedure are EA-4/02 of the European Accreditation Organization or ISO 5725:1994 or the General Uncertainty Measurement (GUM) method."

Annex 21, insert a new note 5, to read: 4/

"Note 5.        In the case of a carrycot installed as described in paragraph 8.1.3.5.6. the connection between the adult safety belt and the restraint shall be simulated. A 500 mm free end length adult safety belt (measured as described in annex 13) is connected by the anchoring plate described in annex 13 to the prescribed anchoring points. The restraint is then connected to the free end adult safety belts. The tension on the adult safety belt, measured between the anchoring point and the restraint shall be  $50 \pm 5$  N."

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1/ Ref. TRANS/WP.29/GRSP/2004/3

2/ Ref. TRANS/WP.29/GRSP/2004/4

3/ Ref. TRANS/WP.29/GRSP/2004/12

4/ Ref. TRANS/WP.29/GRSP/2004/13

Annex 4

DRAFT 04 SERIES OF AMENDMENTS TO REGULATION No. 44  
(Child restraint systems)  
(see para. 26 of this report)

List of contents,

Insert a new item 11, to read:

"11. Production qualification ....." "

Item 11 (former), renumber as item 12 and rename:

"12. Conformity of production and routine tests ....." "

Items 12 to 16 (former), renumber as items 13 to 17.

List of annexes,

Insert a new annex 14, to read:

"Annex 14 – Type approval scheme (flow chart ISO 9001-2000)"

Text of the Regulation,

Paragraph 5.2., replace "03" by "04" (twice)

Insert new paragraphs 2.37. to 2.39., to read:

"2.37. "type approval test", means a test to determine the extent to which a child restraint system type submitted for approval is capable of satisfying the requirements.

2.38. "production qualification test", means a test to determine whether the manufacturer is able to produce a child restraint system in conformity with the child restraint systems submitted for type approval.

2.39. "Routine testing", means the testing of a number of restraint systems selected from a single batch to verify the extent to which they satisfy the requirements."

Paragraph 3.1., amend to read:

"3.1. ... duly accredited expert, and follow the type approval scheme described in annex 14."

Paragraph 3.4., amend to read:

"3.4. The approval authority of a Contracting Party must verify - before granting type approval the existence of satisfactory arrangements and procedures for ensuring effective control so that child restraint systems, equipment or parts when in production conform to the approved type."

Insert new paragraphs 6.4. to 6.5.1., to read:

"6.4. Control of Markings

6.4.1. The technical service conducting the approval tests shall verify that the markings conform to the requirements of paragraph 4.

6.5. Control of Instructions on Installation and the Instructions for Use

6.5.1. and the instructions for use conform to paragraph 15."

Paragraph 9., amend to read:

"9. TEST REPORTS OF TYPE APPROVAL AND OF PRODUCTION QUALIFICATION"

Add a new paragraph 9.4., to read:

"9.4 The test reports of type approval and of production qualification shall record the verification of markings and of instructions on installation and use."

Insert new paragraphs 11. to 11.2.3.1., to read:

"11. PRODUCTION QUALIFICATION

11.1. In order to make sure that the manufacturer's production system is satisfactory, the technical service, which conducted the type approval tests, must carry out tests to qualify production in accordance with paragraph 11.2.

11.2. Qualifying the production of child restraint systems

The production of each new approved type of child restraint system of categories "universal", "semi-universal", and "restricted" must be subjected to production qualification tests.

For this purpose, a random sample of 5 child restraint systems will be taken from the first production batch.

The first production batch is considered to be the production of the first block containing a minimum of 50 child restraint systems and a maximum of 5.000 child restraint systems.

11.2.1. Dynamic tests

11.2.1.1. 5 child restraint systems must be subjected to the dynamic test described in paragraph 8.1.3. The technical service that conducted the type approval tests shall choose the conditions that produced the maximum horizontal head excursion during the type approval dynamic tests, excluding the conditions described in paragraph 7.1.4.10.1.2. above. All the 5 child restraint systems shall be tested under the same conditions.

11.2.1.2. For each test described in 11.2.1.1. the horizontal head excursion and chest accelerations shall be measured.

11.2.1.3. a) The maximum horizontal head excursion results shall comply with the following two conditions:

No value shall exceed 1.05 L, and

$X + S$  shall not exceed L,

Where: L= the limit value prescribed

X= the mean of the values

S= the standard deviation of the values

b) The chest acceleration results shall comply with the requirements of paragraph 7.1.4.2.1. and, in addition, the  $X + S$  condition in 11.2.1.3 a) shall be applied to the 3 ms clipped resultant chest acceleration results (as defined in paragraph 7.1.4.2.1.) and recorded for information only.

11.2.2. Control of Markings

11.2.2.1 The technical service that conducted the approval tests shall verify that the markings conform to the requirements of paragraph 4.

11.2.3. Control of Instructions on Installation and the Instructions for Use.

11.2.3.1. The technical service that conducted the approval tests shall verify that the instructions on installation and the instructions for use conform to paragraph 15."

Paragraph 11. (former), renumber as paragraph 12 and rename:

"CONFORMITY OF PRODUCTION AND ROUTINE TESTS."

Paragraphs 12. to 15. (former), renumber as paragraphs 13. to 16.

Paragraph 16. (former), renumber as paragraph 17. and amend to read:

"17. TRANSITIONAL PROVISIONS

- 17.1. As from the official date of entry into force of the 03 series of amendments, no Contracting Party applying this Regulation shall refuse to grant ECE approval under this Regulation as amended by the 03 series of amendments.
- 17.2. As from 12 months after the date of entry into force, Contracting Parties applying this Regulation shall grant ECE approvals only if the child restraint system type to be approved meets the requirements of this Regulation as amended by the 03 series of amendments.
- 17.3. During the 12-month period which follows the date of entry into force of the 03 series of amendments, Contracting Parties applying this Regulation can continue to grant type approvals to those child restraint systems which comply with the requirements of this Regulation as amended by the 02 series of amendments.
- 17.4. In the same period of 12 months, Contracting Parties applying this Regulation shall not refuse to grant extensions of approval to the preceding series of amendments to this Regulation.
- 17.5. As from the date of entry into force of the 03 series of amendments, the provisions of annex 16 to this Regulation shall apply also to child restraint devices already type approved to the 02 series of amendments.
- 17.6. Starting from the date of entry into force of the 03 series of amendments, Contracting Parties applying this Regulation may refuse the sale of a type of child restraint which does not meet the requirements of paragraph 6. 2. 2. and 6. 2. 14. of the 03 series of amendments.
- 17.7. Starting 36 months after the entry into force of the 03 series of amendments, Contracting Parties applying this Regulation may refuse the sale of child restraint systems which do not meet the requirements of the 03 series of amendments to this Regulation.
- 17.8. As from the date of entry into force of supplement 2 to the 03 series of amendments, the label required by paragraph 4. 5. of this Regulation shall be affixed to all new child restraints manufactured in conformity with this Regulation.

- 17.9. As from the official date of entry into force of the 04 series of amendments, no Contracting Party applying this Regulation shall refuse to grant ECE approval under this Regulation as amended by the 04 series of amendments.
- 17.10. As from 12 months after the date of entry into force of the 04 series of amendments, Contracting Parties applying this Regulation shall grant ECE approvals only if the child restraint system type to be approved meets the requirements of this Regulation as amended by the 04 series of amendments.
- 17.11. During the 12-month period which follows the date of entry into force of the 04 series of amendments, Contracting Parties applying this Regulation can continue to grant type approvals to those child restraint systems which comply with the requirements of this Regulation as amended by the 03 series of amendments.
- 17.12. During the 36-month period which follows the date of entry into force of the 04 series of amendments, Contracting Parties applying this Regulation shall not refuse to grant extensions of approval to the preceding series of amendments to this Regulation.
- 17.13. Starting 48 months after the entry into force of the 04 series of amendments, Contracting Parties applying this Regulation may refuse the sale of child restraint systems which do not meet the requirements of the 04 series of amendments to this Regulation."

Annex 2

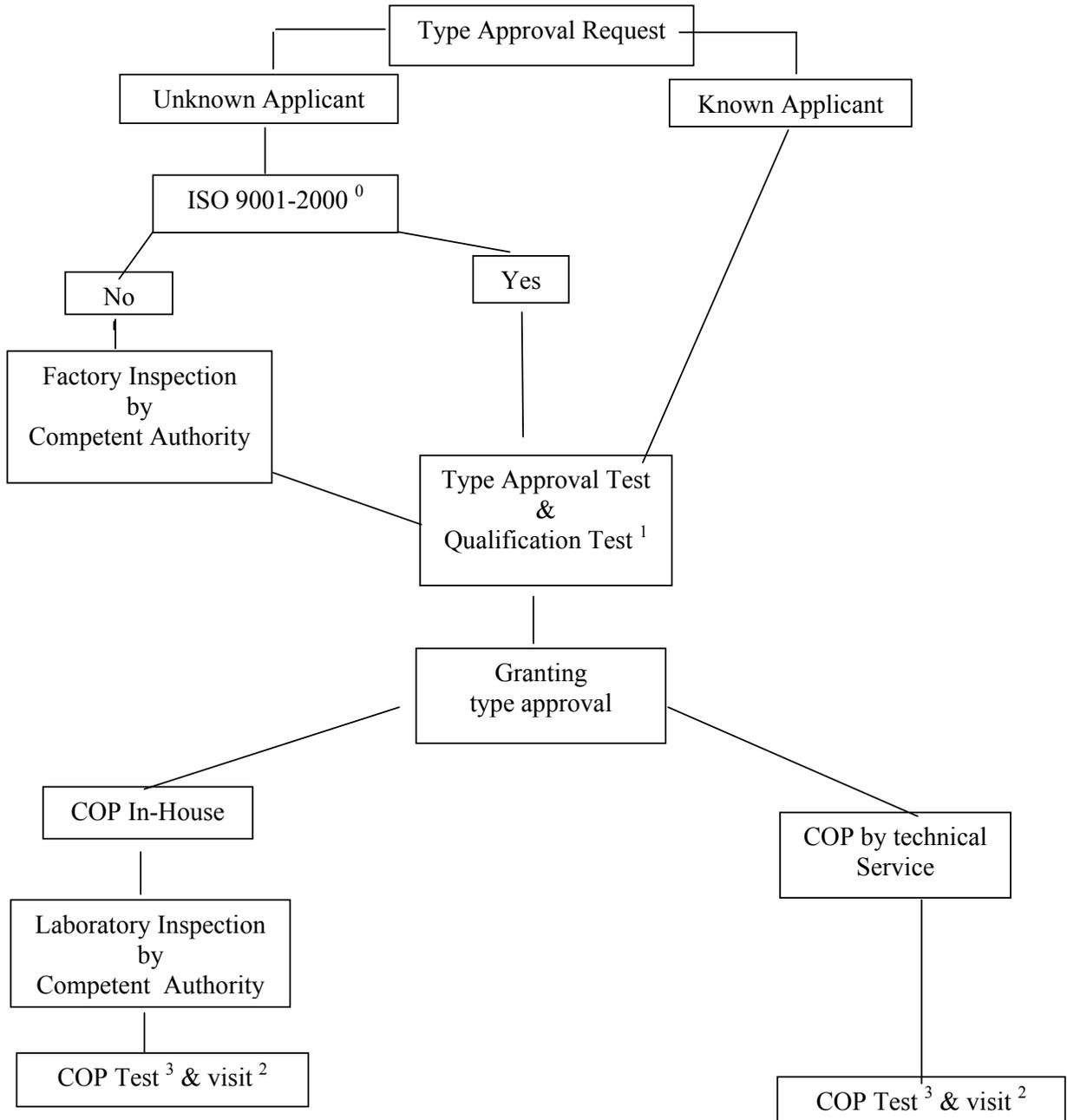
Figures of the approval mark, replace "032439" by "042439" and "032450" by "042450".

Text under the approval marks, replace "032439" by "042439", "032450" by "042450" and "03 series of amendments" by "04 series of amendments" (twice).

Insert new annex 14, to read:

"Annex 14

TYPE APPROVAL SCHEME (FLOW CHART ISO 9001-2000)



- 0) or an equivalent standard to this one with the permissible exclusion of the requirements related to the concepts of design and development, point 7.3 "Customer satisfaction and continual improvement"
- 1) these tests shall be done by the technical service

- 2) visit to the manufacturer for inspection and random sampling by the Authority or technical service
  - a) if there is no ISO 9001-2000: 2 times a year
  - b) if there is an ISO 9001-2000: 1 times a year
- 3) tests in accordance with annex 16
  - a) if there is no ISO 9001-2000:
    - i) of the Authority or technical service during the visit of footnote 2a
    - ii) of the manufacturer between the visits of footnote 2b
  - b) if there is an ISO 9001-2000: taken by the manufacturer, procedure checked during visit of footnote 2b."

Annex 16,

Paragraphs 2.1. to 2.2.2.6., amend to read:

- "2.1. The frequency of testing to the requirements of paragraphs 1.1. to 1.5. and 1.7. shall be on a statistically controlled and random basis in accordance with one of the regular quality assurance procedures, and must be conducted at least once per year.
- 2.2. Minimum conditions for the control of conformity of child restraint systems of categories "Universal", "Semi Universal" and "Restricted", in relation to the dynamic tests according to paragraph 1.6.
- In accordance with the relevant authorities, the holder of an approval will supervise the control of conformity following the method of batch control (paragraph 2.2.1.) or following the method of continuous control (paragraph 2.2.2.).
- 2.2.1. Batch control for the child restraint systems
- 2.2.1.1. The holder of an approval must divide the child restraint systems into batches which are as uniform as possible in regard to raw material or intermediate products involved in their manufacture (different colour of shell, different manufacture of harness) and in regard to production conditions. The numbers in a batch must not exceed 5000 units.
- In agreement with the relevant authorities the tests can be carried out by the technical service authorities or under the responsibility of the holder of an approval.
- 2.2.1.2. A sample must be taken in each batch in accordance with the provisions of paragraph 2.2.1.4. from a minimum of 20 per cent of the batch quantity, which has to be produced of the actual batch.
- 2.2.1.3. The characteristics of the child restraint systems and the number of dynamic tests to be

conducted are given in paragraph 2.2.1.4.

2.2.1.4. In order to be accepted, a batch of child restraint systems must satisfy the following conditions:

Number in the batch	Number of samples/child restraint systems characteristics	Combined number of samples	Acceptance criteria	Rejection criteria	Degree of control rigour
N<500	1st = 1MH	1	0	-	Normal
	2nd = 1MH	2	1	2	
500<N<5000	1st = 1MH+1LH	2	0	2	Normal
	2nd = 1MH+1LH	4	1	2	
N<500	1st = 2MH	2	0	2	Strengthened
	2nd = 2MH	4	1	2	
500<N<5000	1st = 2MH+2LH	4	0	2	Strengthened
	2nd = 2MH+2LH	8	1	2	

Note :

MH signifies harder configuration (the least good results obtained in approval or extension of approval)

LH signifies less hard configuration (the best results obtained in approval or extension of approval)

This dual sampling plan functions as follows:

For a normal control, if the first sample does not contain any defective units the batch is accepted without testing a second sample. If it contains two defective units, the batch is rejected. Finally, if it contains one defective unit a second sample is extracted and it is the cumulative number, which must satisfy the condition of column 5 of the table above.

There is a change from normal control to strengthened control if, out of 5 consecutive batches, two are rejected. Normal control is resumed if 5 consecutive batches are accepted.

If any batch is rejected, the production is considered to be non-conforming and the batch shall not be released.

If 2 consecutive batches subjected to the strengthened control are rejected, the provisions of paragraph 13. are applied.

2.2.1.5. The control of child restraint systems conformity is undertaken starting with the batch manufactured after the first batch which was subjected to production qualification.

2.2.1.6. The test results described in paragraph 2.2.1.4. shall not exceed L, where L is the limit value prescribed for each approval test.

2.2.2. Continuous control

2.2.2.1. The holder of an approval shall be obliged to carry out continuous quality control of his manufacturing process on a statistical basis and by sampling. In agreement with the relevant authorities, the tests can be carried out by the technical service authorities or under the responsibility of the holder of an approval which is responsible for the traceability of the product.

2.2.2.2. The samples must be taken in accordance with the provisions of paragraph 2.2.2.4.

2.2.2.3. The characteristic of the child restraint systems is taken at random and the tests to be carried out are described in paragraph 2.2.2.4.

2.2.2.4. control shall meet the following requirements.

Child restraint systems taken	Degree of control rigour
0.02 % means one child restraint system taken from every 5000 manufactured	Normal
0.05 % means one child restraint system taken from every 2000 manufactured	Strengthened

This dual sampling plan functions as follows:

If the child restraint system is considered to conform, the production conforms.

If the child restraint system does not meet the requirements, a second child restraint system shall be taken,

If the second child restraint system meet the requirements, the production conforms,

If both (the first and the second) child restraint systems do not meet the requirements, the production does not conform and child restraint systems that are likely to present the same failure shall be withdrawn and necessary steps shall be taken to re-establish the conformity of the production.

Strengthened control will replace normal control if, out of 10,000 child restraint systems manufactured consecutively, the production has to be withdrawn twice.

Normal control is resumed if 10,000 child restraint systems manufactured consecutively are considered to conform.

If production subjected to the strengthened control has been withdrawn on two

consecutive occasions, the provisions of paragraph 13. are applied.

- 2.2.2.5. The continuous control of child restraint systems is undertaken starting after the production qualification.
- 2.2.2.6. The test results described in paragraph 2.2.2.4. shall not exceed L, where L is the limit value prescribed for each approval test."

Add a new paragraph 2.3.2., to read:

- "2.3.2. Where a test sample fails a particular test to which it has been subjected, a further test to the same requirement shall be carried out on at least three other samples. In the case of dynamic tests if one of the latter fails, the production is considered to be non-conforming and the frequency shall be raised to the higher one if the lower one was used according to paragraph 2.3. and necessary steps shall be taken to re-establish the conformity of the production."

Paragraph 2.4., amend to read:

- "2. 4. When production is found to be non-conforming according to paragraphs 2.2.1.4., 2.2.2.4. or 2.3.2. , the holder of the approval or his duly accredited expert shall: "

Paragraph 2.4.2., should be deleted.

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Annex 5

DRAFT CORRIGENDUM 2 TO SUPPLEMENT 5 TO THE 03 SERIES OF AMENDMENTS  
TO REGULATION No. 44  
(child restraint systems)  
(see para. 27 of this report)

Paragraph 2.1.3., amend to read:

"2.1.3. The retention system of Child restraint systems may be of two classes:

an integral class if the retention of the child within the restraint system is independent of any means directly connected to the vehicle;

a non-integral class if the retention of the child within the restraint system is dependent upon any means directly connected to the vehicle;"

Paragraph 6.1.3., amend to read:

"6.1.3. According to the category which it belongs to, the child restraint shall be secured to the vehicle structure or to the seat structure."

POSSIBLE CONFIGURATIONS FOR APPROVAL  
GROUPS / CATEGORIES TABLE

<u>TNR 12 CATEGORY GROUP</u>		Universal (1)		Semi-universal (2)		Restricted		Specific Vehicle	
		CRS	ISOFIX CRS	CRS	ISOFIX CRS	CRS	ISOFIX CRS	CRS	ISOFIX CRS
0	Carry-cot	A	NA	A	A	A	NA	A	A
	Rearward facing	A	NA	A	A	A	NA	A	A
0+	Rearward facing	A	NA	A	A	A	NA	A	A
I	Rearward facing	A	NA	A	A	A	NA	A	A
	Forward facing (integral)	A	A	A	A	A	NA	A	A
	Forward facing (non integral)	A	NA	A	NA	A	NA	A	A
II	Rearward facing	A	NA	A	NA	A	NA	A	A
	Forward facing (integral)	A	NA	A	NA	A	NA	A	A
	Forward facing (non integral)	A	NA	A	NA	A	NA	A	A
III	Rearward facing	A	NA	A	NA	A	NA	A	A
	Forward facing (integral)	A	NA	A	NA	A	NA	A	A
	Forward facing (non integral)	A	NA	A	NA	A	NA	A	A

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