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Working Party on the Construction of Vehicles

Working Party on Passive Safety (GRSP)

REPORT OF THE MEETING OF EXPERTS ON PASSIVE SAFETY
ON ITS TWENTY-THIRD SESSION

(4 - 8 May 1998)

1. The Meeting of Experts on Passive Safety held its twenty-third session from 4 May (afternoon) to 8 May (morning) 1998 under the chairmanship of Mr. C. Lomonaco (Italy). Experts from the following countries participated in the work: Belgium; Canada; Czech Republic; Denmark; Finland; France; Germany; Italy; Netherlands; Poland; Romania; Russian Federation; Spain; Sweden; United Kingdom; United States of America. A representative of the European Commission (EC) participated. Representatives of Japan took part in the session under paragraph 11 of the Commission's Terms of Reference. Experts from the following non-governmental organizations participated: International Organization for Standardization (ISO); International Touring Alliance / International Automobile Federation (AIT/FIA); Consumers International (CI); International Organization of Motor Vehicle Manufacturers (OICA); International Motorcycle Manufacturers Association (IMMA); Liaison Committee for the Manufacture of Automobile Equipment and Spare Parts (CLEPA).

2. The documents without a symbol distributed during the session are listed in annex 1 to this report.

REGULATION No. 17 (Strength of seats)

Documentation: TRANS/WP.29/GRSP/1997/1; TRANS/WP.29/GRSP/1997/6; TRANS/WP.29/GRSP/1997/8; TRANS/WP.29/GRSP/1998/1; informal documents Nos. 4, 12 and 17 of annex 1 to this report.

3. The Meeting of Experts resumed consideration of the improved protection of passengers, particularly children in child restraints, against the luggage causing the deformation of seat-backs in accidents (TRANS/WP.29/GRSP/22, para. 3).

4. Informal document No. 12 tabled by the expert from OICA presented accident data showing that about a quarter of evaluated accidents occurred with some load of luggage, but only eight per cent occurred with a fully loaded vehicle luggage compartment. However, in the absence of information regarding the number of passengers in vehicles with such a full load of luggage, the delegates of Denmark, Finland, Sweden and the United Kingdom, supporting document TRANS/WP.29/GRSP/1997/1, maintained their request for stricter limits to seat-back(s) deformation under load of luggage. The expert from Consumers International reiterated that the proposal by the United Kingdom in document TRANS/WP.29/GRSP/1997/1 had been based on actual test results and should establish coherence between Regulations Nos. 17 and 44.

5. A number of other delegations, including Belgium, France, Germany, Italy, Spain and the Russian Federation maintained their support to provisions of the 07 series of amendments to the Regulation (document TRANS/WP.29/601). The expert from OICA recalled that improved vehicle constructions reduced injuries in accidents. He said that injuries by luggage were relatively rare and that priorities and cost benefits needed to be evaluated for further vehicle construction improvements. Whilst he mentioned Euro 1 million, the expert from the United States of America indicated that in his country US\$ 2 million for one life saved in an accident was considered cost beneficial for vehicle construction modifications.

6. To help to resolve the stalemate situation, the experts from OICA, Germany and Italy agreed to search for accident data showing directly injuries caused by luggage in vehicles, for a possible examination at the next session. The expert from France suggested that experience should be gained with tests of vehicle seat-backs conforming to the 07 series of amendments to Regulation No. 17.

7. To eliminate difficulties which had been experienced in tests prescribed by the 07 series of amendments to Regulation No. 17, the Meeting of Experts considered and adopted document TRANS/WP.29/GRSP/1998/1, as amended by informal document No. 17. The adopted amendments are noted in annex 2 to this report. The Meeting of Experts agreed to transmit the amended document to the Working Party and to the Administrative Committee (AC.1) for consideration at its tenth session as draft Supplement 1 to the 07 series of amendments to Regulation No. 17. The expert from the Netherlands indicated his reservation to the amendments based on Informal document No. 17, asking for more time to study these provisions.

8. The Meeting of Experts also considered and adopted document TRANS/WP.29/GRSP/1997/8, aligning for M2 category of vehicles the provisions of Regulation No. 17 with the EC Directive (96/37/EC). It was agreed to

incorporate the adopted amendment into the proposal for draft Supplement 1 to the 07 series of amendments (see para. 7 above).

9. A number of delegations indicated their reservations to the proposal by Spain contained in document TRANS/WP.29/1997/6, which in their view would mean major modifications of design of vehicles concerned. Certain modifications correcting and clarifying the text of the document were suggested (the words "way out space" to read "step out space" and annex 9 to be renumbered annex 10). It was agreed to resume the consideration of this matter at the next session.

10. The expert from Spain presented informal document No. 4 and gave a video demonstration supporting his request to reconsider the tests of Regulation No. 17 in such a way that they conform to the actual accident situation where the seat was occupied by a passenger at the moment of impact. Considering this matter, it was recalled that the same video had been presented in the United States of America and the question of the seat strength studied by NHTSA (National Highway Traffic Safety Administration); the expert from Germany agreed to provide copies of the NHTSA study for the resumed consideration of this item at the next session.

AMENDMENTS TO ECE REGULATIONS

(a) Regulation No. 12 (Steering systems)

Documentation: TRANS/WP.29/GRSP/1997/7; TRANS/WP.29/GRSP/1998/6 and Add.1; informal documents Nos. 7, 8 and 18 of annex 1 to this report.

11. Considering the proposal contained in document TRANS/WP.29/GRSP/1997/7, the Meeting of Experts accepted the modified version of this proposal tabled by OICA in informal document No. 18. The adopted amendments to annexes 3 and 4 of Regulation No. 12, based on this informal document, are noted in annex 3 to this report.

12. Documents TRANS/WP.29/GRSP/1998/6 and Add.1 were considered and adopted by GRSP, although deleting for the time being certain parts of the proposal, where additional consideration was felt necessary. The agreed modifications to both documents are noted in annex 3 to this report.

13. The Meeting of Experts agreed to transmit amendments to Regulation No. 12 to the Working Party and to the Administrative Committee (AC.1) for consideration at its tenth session as a proposal for draft Supplement 3 to the 03 series of amendments to Regulation No. 12.

14. The expert from the Netherlands distributed informal document No. 7, containing results of the research made in his country of interaction of airbags and safety-belts with load limiters. Using some results of this research as a justification, he proposed modifications to Regulation No. 12 (informal document No. 8), alternative to the deleted section of the proposal by France (see para. 12 above). GRSP agreed to consider the proposal at the next session and requested the secretariat to distribute informal document No. 8 with an official symbol.

(b) Regulation No. 14 (Safety-belt anchorages)

Documentation: TRANS/WP.29/GRSP/1997/11; TRANS/WP.29/GRSP/1998/2; informal document No. 10 of annex 1 to this report.

15. Considering the proposal by the United Kingdom to introduce in Regulation No. 14 provisions for ISOFIX anchorages for the child restraints, the discussion focused on the question of the anchorage for a top tether, intended to prevent the forward rotation of the child restraint.

16. The expert from ISO confirmed that the ISOFIX project had been divided in two parts and the first one considering two rigid anchorages in the bight of the seat had already been finalized and accepted by vote. However, the second part, considering a possibility of a top tether strap and anchorage was not yet that advanced and further considerations in ISO were in progress.

17. In considering the function of the top tether for child restraints, positive experience of Australia and Canada was taken into account, as well as the intentions to include the top tether in the Federal Rule of the United States of America. However, a number of experts considered the top tether to be prone to misuse and stated their preference for other methods of preventing the child restraint rotation, like e.g. a child restraint fixation tensioning system. In this respect, attention was drawn to the proposal by CLEPA, contained in informal document No. 13. Considering this proposal, an opinion prevailed that the mechanical properties of the seat cushion would also need to be specified if this approach was taken (see para. 40 below).

18. Considering that introduction of ISOFIX anchorages should be an important step towards positive and proper fitting of child restraints in vehicles, a majority of delegations supported the proposal to accept for Regulation No. 14 in the first stage only two rigid ISOFIX anchorages and to continue the consideration of a second stage in which the mean(s) of prevention of the forward rotation of an ISOFIX attached child restraint should be decided. It was noted that stage 1 of Regulation No. 14 modification should only be expected to prevent incorrect installation of child restraint systems, whilst maintaining their protective properties and that improved performance of child restraints should later be achieved in stage 2 modification.

19. The experts from Canada, the United Kingdom, the United States of America and the Consumers International indicated their disagreement with the 2-stage procedure and said that, in their view, it would only be suitable for specific but not for universal child restraints. They drew attention to the current provisions of Regulations Nos. 14 and 44 already allowing specific anchorages and child restraint systems.

20. To assist GRSP in its work, the expert from the United Kingdom agreed to prepare, in cooperation with CLEPA, a modified proposal for a universal child restraint system with ISOFIX, although he doubted that it would be available for the next session. Interest in work on harmonization of prescriptions for the location of the two ISOFIX anchorage points with respect to vehicle rear seats was also indicated by the experts from Germany and France.

21. The expert from France introduced informal document No. 10, related to combined protection systems composed of a front airbag and seat bearing anchorages for 3-point safety-belts with a load limiter at the upper anchorage. He informed GRSP of his intention to prepare, for consideration at the next session, a specific proposal for this system.

22. Consideration of document TRANS/WP.29/GRSP/1998/2 was deferred to the next session. The expert from CLEPA agreed to check the reference made in the document to Regulation No. 80.

(c) Regulation No. 16 (Safety-belts)

Documentation: TRANS/WP.29/GRSP/1998/3; TRANS/WP.29/GRSP/1998/7; TRANS/WP.29/GRSP/1998/11; informal documents Nos. 1, 3 and 20 of annex 1 to this report.

23. The expert from France informed GRSP that the joint proposal by France, Germany and the Netherlands (TRANS/WP.29/GRSP/1998/11) replaced and superseded documents TRANS/WP.29/GRSP/1998/3 and TRANS/WP.29/GRSP/1998/7 and that it was intended to allow approvals of safety-belts with load limiters, designed to be used in conjunction with airbags.

24. The expert from CLEPA supported document TRANS/WP.29/GRSP/1998/11 and tabled informal document No. 1, proposing additional amendments to this joint proposal. He said that this informal document incorporated also the provisions proposed by OICA in informal document No. 3. This was confirmed by the expert from OICA, who withdrew informal document No. 3 from consideration.

25. Considering TRANS/WP.29/GRSP/1998/11, as amended by informal document No. 1, there were considerable differences of opinion. The final solution negotiated in the session was distributed as informal document No. 20, tabled jointly by the experts from Spain, OICA and CLEPA.

26. Informal document No. 20 was considered and adopted by GRSP with a minor amendment. The adopted text is reproduced in annex 4 to this report and it was agreed to transmit it to the Working Party and to the Administrative Committee (AC.1) for consideration at its tenth session as a proposal for draft Supplement 9 to the 04 series of amendments to Regulation No. 16.

27. The expert from the United Kingdom noted that provisions proposed for safety-belts with load limiters made the airbag a critical part of the restraint system and drew the attention of GRSP to the fact that airbags had in principle a limited useful lifetime. To address this matter properly, he requested that vehicle users should be informed and that the lifetime of airbags should be taken into account in regulatory provisions.

28. The experts from CLEPA and OICA confirmed that instructions for replacements of airbags after the end of their useful life (usually 10 years) are given in user manuals. They confirmed that other components of motor vehicles had also limited lifetime, like e.g. safety-belts (15 years) or catalytic converters. They also clarified that the end of projected lifetime only means a reduced confidence in proper function of the product, which may in fact continue to be efficient for a much longer time. The expert from the Netherlands suggested that for the airbags the matter could become easier if the industry would be able to guarantee a lifetime of 15 years, which was considered as corresponding to the lifetime of vehicles.

(d) Regulation No. 21 (Interior fittings)

Documentation: TRANS/WP.29/GRSP/R.163; TRANS/WP.29/GRSP/1997/2; TRANS/WP.29/GRSP/1998/8; informal documents Nos. 5 and 11 of annex 1 to this report.

29. In the resumed discussion concerning his proposal (TRANS/WP.29/GRSP/R.163 and TRANS/WP.29/GRSP/1997/2), the expert from the United States of America informed GRSP that additional work was in progress to cover side airbags and that amendments to the above documents would therefore also be needed for incorporating the new test method into Regulation No. 21.

30. The expert from the EEVC briefed GRSP on the progress of work by the Committee (TRANS/WP.29/GRSP/22, para. 34) and confirmed that the intentions

were to follow the Federal Motor Vehicle Safety Standard FMVSS 201 as closely as possible.

31. To support considerations regarding improvements of Regulation No. 21 with respect to head protection, the expert from France made available accidentological data showing the occurrence of head impacts for restrained and unrestrained occupants of vehicles (informal document No. 11).

32. The expert from Spain proposed that in Regulation No. 21 the interior of the vehicle and the requirements on interior fittings should be divided into three areas (informal document No. 5). After an initial consideration of this idea, he agreed to prepare a concrete proposal for amending Regulation No. 21.

33. The proposal (TRANS/WP.29/GRSP/1998/8) to exclude from testing to Regulation No. 21 vehicles equipped with driver's and passenger's airbags and three-point safety-belts in all front seats, if such a vehicle had been approved to Regulation No. 94, 01 series of amendments, did not find sufficient support with delegations and was rejected by GRSP.

34. The Meeting of Experts agreed to resume consideration of amendments to Regulation No. 21 at its next session, awaiting the additional proposals announced above.

(e) Regulation No. 33 (Head-on collision)

Documentation: TRANS/WP.29/GRSP/1998/9 and Add.1.

35. The proposal contained in the above-listed documents was considered and adopted by GRSP and it was agreed to transmit it to the Working Party and to the Administrative Committee (AC.1) for consideration at its tenth session as a proposal for draft Supplement 1 to Regulation No. 33.

36. The expert from the United Kingdom reserved his position on this decision, noting that Regulation No. 33 controlled certain aspects which were not addressed by Regulation No. 94. As an example, he mentioned the 50 percentile dummy used in Regulation No. 94, whilst certain aspects in Regulation No. 33 would be controlled even for 95 percentile occupant. His view was not shared by the expert from France, who considered Regulation No. 94 to be more realistic by using the anthropogenic dummies in the test.

(f) Regulation No. 44 (Child restraints)

Documentation: TRANS/WP.29/GRSP/1997/10; TRANS/WP.29/GRSP/1997/12; informal documents Nos. 9 and 13 of annex 1 to this report.

37. Informal document No. 9 proposed by Consumers International was considered and adopted by the Meeting of Experts with modifications, which included deletion of the last two lines of the text from a label taken over from TRANS/WP.29/GRSP/1997/10, Figure 10. The adopted text is reproduced in annex 5 to this report. The experts from the United States and Canada objected to the use of an ISO pictogram in the label, because this modification created a departure from the label prescribed in their countries.

38. The Meeting of Experts agreed to transmit the adopted text (see para. 37 above) to the Working Party and to the Administrative Committee (AC.1) for consideration at its tenth session as a proposal for draft Supplement 2 to the 03 series of amendments to Regulation No. 44. To provide the manufacturers

time for introducing the proposed warning labels into production, GRSP agreed that this Supplement should be accompanied by transitional provisions and invited CLEPA to prepare a relevant proposal for consideration by WP.29 and by AC.1 at its tenth session (November 1998).

39. Consideration of the proposal related to ISOFIX fixations for child restraints (TRANS/WP.29/GRSP/1997/12) was deferred, noting that the amendments remained to be proposed to Regulation No. 14 in order to introduce ISOFIX anchorages for universal child restraints (see para. 20 above).

40. Informal document No. 13 was considered in conjunction with the proposal for amendments to Regulation No. 14 (see para. 17 above). The proposal was only supported by the expert from Germany. On the other side, several delegations opposed the idea of prescribing the minimum seat surface area for supporting the child restraint and a number of experts considered the proposal only partial because it did not contain any requirements concerning mechanical properties of the seat cushion.

(g) Regulation No. 94 (Frontal collision protection)

Documentation: TRANS/WP.29/GRSP/1997/10.

41. Referring to his summary document (see above), the expert from Consumers International reiterated that, after an agreement was reached on improved marking of child restraints (see paras. 37 and 38 above), there should also be improved labelling of vehicles. He indicated his intention to prepare a concrete proposal for consideration at the next session and counted on cooperation with OICA in resolving this matter of concern.

DRAFT REGULATION ON AIRBAGS

Documentation: TRANS/WP.29/GRSP/1998/4; informal documents Nos. 2 and 19 of annex 1 to this report.

42. Considering the proposal by Germany (TRANS/WP.29/GRSP/1998/4), a number of amendments were agreed in principle for the examined section of the document (up to paragraph 5.3.3.), based also on informal documents Nos. 2 and 19, and are noted in annex 6 to this report.

REGULATION No. 22 (Protective helmets)

Documentation: TRANS/WP.29/GRSP/1998/5; informal documents Nos. 14, 15 and 16 of annex 1 to this report.

43. Document TRANS/WP.29/GRSP/1998/5 was considered with the amendments prepared by the United Kingdom and tabled by the expert from Germany in informal document No. 14. The amendments adopted by the Meeting of Experts are noted in annex 7 to this report. Several delegations, including those of France and Italy, called for round-robin tests to verify repeatability and reproducibility of the tests proposed for the 05 series of amendments to Regulation No. 22. To allow at least for some additional tests, GRSP agreed to keep for the time being the proposal under consideration and await confirmation of the values marked in square brackets. It was also noted that transitional provisions concerning the 05 series of amendments remained to be proposed.

44. The expert from the United Kingdom informed GRSP that, in the process of accession by the European Community to the 1958 Agreement, Regulation No. 22 was the only one of the 78 Regulations selected by the EC, where an exemption was made for the United Kingdom, indicating that this Regulation "shall not apply to the United Kingdom before 1 July 2000 or, if earlier, until such time as the Community accedes to an amended UN/ECE regulation on protective helmets and visors which provides for the same or higher standards for such helmets and visors as are applicable in the United Kingdom on the 27 November 1997." To comply with the above date, he asked that matters concerning Regulation No. 22 be dealt with as a priority item during the next session of GRSP.

45. Informal documents Nos. 15 and 16 were not discussed in any detail and the secretariat was requested to distribute them with an official symbol for consideration at the next session. The expert from Germany said that work was in progress regarding the provisions for visors and that the relevant proposal should soon be made available to GRSP.

OTHER BUSINESS

(a) Regulation No. 95 (Lateral collision protection)

Documentation: TRANS/WP.29/GRSP/1998/12.

46. The proposal by the Netherlands for an updated procedure of calibration of neck and lumbar spine of EUROSID-1 dummy was considered and adopted by GRSP with, however, study reservations by Italy, the Russian Federation and the European Community. It was noted that the adopted amendment would align that section of Regulation No. 95, 01 series of amendments with the standing practice of the test laboratories, following the instructions of the EUROSID-1 manufacturer.

47. The Meeting of Experts agreed to transmit the adopted document TRANS/WP.29/GRSP/1998/12 to the Working Party and to the Administrative Committee (AC.1) for consideration at its tenth session (November 1998), as a draft Supplement 1 to the 01 series of amendments to Regulation No. 95.

48. Recalling the consideration of the barrier designs during the previous session (TRANS/WP.29/GRSP/22, paras. 9-12), the expert from EEVC informed GRSP that the European Experimental Vehicles Committee continued to work on this programme, but would not be able to execute it fully due to reduced funds.

49. The expert from OICA expressed the disappointment of his organization with the situation in which the 01 series to Regulation No. 95 will be in force and the test results continued to be influenced by barrier design.

(b) Regulation No. 29 (Cabs of commercial vehicles)

Documentation: Informal document No. 6 of annex 1 to this report.

50. The proposal by the expert from the Czech Republic to exclude from Regulation No. 29 vehicles of category N1, derived from those of category M1, and for some additional modifications of the Regulation was briefly discussed. It was again recalled that inclusion of the N1 category of vehicles had been carried out in the 01 series of amendments to the Regulation (TRANS/WP.29/GRSP/22, para. 30). The secretariat was requested to distribute informal document No. 6 with an official symbol for consideration at the next session of GRSP.

AGENDA FOR THE NEXT SESSION

51. For the twenty-fourth session, to be held in Geneva from 1 December (14.30 h) to 4 December (12.30 h) 1998 1/, the Meeting of Experts agreed on the following agenda:

1. Draft Regulation on airbags - development
2. Amendments to ECE Regulations
 - 2.1. Regulation No. 12 (Steering systems)
 - 2.2. Regulation No. 14 (Safety-belt anchorages)
 - 2.3. Regulation No. 17 (Strength of seats)
 - 2.4. Regulation No. 21 (Interior fittings)
 - 2.5. Regulation No. 29 (Cabs of commercial vehicles)
 - 2.6. Regulation No. 44 (Child restraints)
 - 2.7. Regulation No. 94 (Frontal collision protection)
(see para. 41 above)
 - 2.8. Regulation No. 95 (Lateral collision protection)
(see paras. 48 and 49 above)
3. Regulation No. 22 (Protective helmets) 2/
4. Other business

1/ As part of the secretariat's efforts to reduce expenditure, all the official documents distributed prior to the session by mail will not be available in the conference room for distribution to session participants. Delegates are kindly requested to bring their copies of documents to the meeting.

2/ This item will be considered not earlier than Thursday afternoon, 3 December 1998.

Annex 1

LIST OF INFORMAL DOCUMENTS DISTRIBUTED WITHOUT A SYMBOL DURING THE SESSION

No.	Transmitted by	Agenda item	Language	Title
1.	CLEPA	2.3.	E	Regulation No. 16: Draft amendments to document WP29/GRSP/1998/11 proposed by the experts of CLEPA
2.	OICA	3.	E	Draft Regulation on replacement airbags (document TRANS/WP29/GRSP/1998/4)
3.	OICA	2.3.	E	OICA proposals for amendment of Regulation No. 16 (document TRANS/WP29/GRSP/1998/11)
4.	Spain	1.	E	INTA comments to Regulation ECE R17
5.	Spain	2.4.	E	INTA comments to Regulation ECE R21
6.	Czech Rep.	5.2.	E	Proposal for a draft amendment to Regulation No. 29-01
7.	Netherlands	2.1.	E	Research with regard to safety belts with load limiters, intended to be used in conjunction with airbags
8.	Netherlands	2.1.	E	Proposal for draft amendments to Regulation No. 12
9.	Consumers International	2.6.	E	A proposal for an amendment to Regulation 44 to improve the warning about hazards from airbags
10.	France	2.2.	E	Updating Regulation 14 on seatbelt anchor points, as a result of recent technical developments
11.	France	2.4.	E	Head injury for car occupants with or without seat belt (accident data analysis by L.A.B.)
12.	OICA	1.	E	Breakdown of luggage load carried in the boot of passenger cars involved in personal injury crashes in several European countries between 1994 and 1997 (Source: European Accident Causation Study)
13.	CLEPA	2.6.	E	Proposal for draft amendments (04 series) to Regulation No. 44
No.	Transmitted by	Agenda item	Language	Title

14.	Germany	4.	E	Draft Corrigendum to proposal for draft amendments (05 series) the Regulation No. 22
15.	Germany	4.	E	Draft proposal for 05 series of amendments to Regulation No. 22
16.	Germany	4.	E	Draft proposal for 04 series of amendments to Regulation No. 22
17., 17a	CLEPA and Germany	1.	E	Refers to TRANS/WP.29/GRSP/1998/1
18.	OICA	2.1.	E	Draft amendment to Regulation No. 12
19.	CLEPA	3.	E	Document TRANS/WP.29/GRSP/1998/4 - German proposal: Replacement AIRBAG Systems
20.	Spain, OICA and CLEPA	2.3.	E	Proposal for draft amendments (Supplement 9 to the 04 series) to Regulation No. 16

Annex 2

AMENDMENTS TO THE PROPOSAL FOR DRAFT SUPPLEMENT 1 TO THE 07 SERIES OF
AMENDMENTS TO REGULATION No. 17 ADOPTED BY THE MEETING OF EXPERTS
(Document TRANS/WP.29/GRSP/1998/1)

General amendments:

Throughout the text of the Regulation (07 series of amendments) correct the word "headrest(s)" to read "head restraint(s)" and the word "seat back(s)" to read "seat-back(s)".

Paragraph 5.13.1., amend to read:

".... This requirement is deemed to be met if, during and after the test described in annex 9, the seat backs remain in position and the locking mechanisms remain in place. However, the deformation of the seat backs and their fastenings during the test is permitted, provided that the forward contour of the parts of the tested seat back and/or head restraints, that are harder than 50 Shore A, does not move forward of a transverse vertical plane which passes through:

- (a) a point of 150 mm forward of the R point of the seat in question, for the parts of the head restraint;
- (b) a point of 100 mm forward of the R point of the seat in question, for parts of the seat-back;

excluding the rebound phases of the test blocks.

For integrated head restraints, the limit between the head restraint and the seat-back is defined by the plane perpendicular to the reference line 540 mm from the R point.

All measurements shall be taken in the longitudinal median plane of the corresponding seat or seating position for each seating position constituting the forward boundary of the luggage compartment.

During the test described in annex 9, the test blocks shall remain behind the seat back(s) in question."

Paragraph 5.13.2., amend to read:

"....
This requirement is deemed to be met if, during the test, the partitioning systems remain in position. However, the deformation of the partitioning systems during the test is permitted, provided that the forward contour of the partitioning (including parts of the tested seat-back(s) and/or head restraint(s) that are harder than 50 Shore A does not move forward of a transverse vertical plane which passes through

- (a) a point of 150 mm forward of the R point of the seat in question, for parts of the head restraint;
- (b) a point of 100 mm forward of the R point of the seat in question, for parts of the seat-back and part of the partitioning system other than the head restraint.

For integrated head restraint, the limit between the head restraint and the seat-back is the one defined in paragraph 5.13.1.

All measurements shall be taken in the longitudinal median plane of the corresponding seat or seating position for each seating position constituting the forward boundary of the luggage compartment.

After the test, no sharp or rough edges likely to increase the danger or severity of injuries of the occupants shall be present."

Annex 9, paragraph 2.1.1.1. (new), amend to read:

"2.1.1.1. At the option of the car manufacturer, parts whose hardness is lower than 50 Shore A can be removed from the tested seat and head restraint for the tests."

Annex 3

AMENDMENTS TO THE PROPOSAL FOR DRAFT SUPPLEMENT 3 TO THE 03 SERIES OF
AMENDMENTS TO REGULATION No. 12 ADOPTED BY THE MEETING OF EXPERTS
(TRANS/WP.29/GRSP/1998/6 and Add.1 and informal document No. 18)

Paragraphs 3.1.2.8. and 3.2.2.4. (new), to be deleted.

Paragraph 4.3.4.3. (new), amend to read:

"4.3.4.3. the symbol R94-01 in the case of an approval pursuant
paragraph 5.2.1. below."

Paragraph 5.3.1. (new), to be deleted.

Annex 3, insert a new paragraph 2.4.5., to read:

"2.4.5. The steering wheel, if adjustable, shall be placed in the normal
position indicated by the manufacturer or, failing that, midway
between the limits of its range(s) of adjustment."

Annex 4, paragraph 2.2.1., amend to read:

".... In the case of an adjustable steering control, both tests
shall be made with the wheel adjusted to the normal position
indicated by the manufacturer or, failing that, midway between the
limits of its range(s) of adjustment."

Annex 4

PROPOSAL FOR DRAFT SUPPLEMENT 9 TO THE 04 SERIES OF AMENDMENTS
TO REGULATION No. 16 ADOPTED BY THE MEETING OF EXPERTS

Insert a new paragraph 5.3.4.2.2.5., to read:

"5.3.4.2.2.5. If the safety-belt is approved following the provisions of paragraph 6.4.1.3.3. of this Regulation, it shall be marked with the word "AIRBAG" in a rectangle."

Insert a new paragraph 6.4.1.3.3., to read:

"6.4.1.3.3. In the case of a safety-belt intended to be used in an outboard front seating position protected by an airbag in front of it, the displacement of the chest reference point may exceed that specified in paragraph 6.4.1.3.2. above if its speed at this value does not exceed 24 km/h."

Paragraph 7.7.5., amend to read:

"7.7.5. The trolley speed immediately before impact, the forward displacement of the manikin and the speed of the chest at a 300 mm displacement of the chest shall be measured."

Annex 1,

Item 11, insert a reference to a new footnote 4/ and a new footnote 4/, to read:

"4/ If a safety-belt is approved following the provisions of paragraph 6.4.1.3.3. of this Regulation, this safety-belt shall only be installed in an outboard front seating position protected by an airbag in front of it, under the condition that the vehicle concerned is approved to Regulation No. 94, 01 series of amendments or its any later version in force."

Annex 2,

Insert a new example of an approval mark, to read:

Aer4m



042439

AIRBAG

The safety-belt bearing this type-approval mark is a three-point belt ("A") fitted with an energy absorber ("e"), approved as meeting the specific requirements of paragraph 6.4.1.3.3. of this Regulation, and with a multiple-sensitivity ("m") type 4 ("r4") retractor, in respect of which type-approval was granted in the Netherlands ("E4") under the approval number 042439. The first two digits indicate that the Regulation already incorporated the 04 series of amendments at the time of the approval. This safety-belt has to be fitted to a vehicle equipped with an airbag in the given seating position."

Annex 14,

Insert a new paragraph 2.2.3.1., to read:

- "2.2.3.1. In the case of approval following paragraph 6.4.1.3.3. of this Regulation and paragraph 1.6.1. of this annex, it is only specified that no part of the belt shall be destructed or disengaged, and that a speed of 24 km/h of the chest reference point at 300 mm displacement shall not be exceeded."

Annex 5

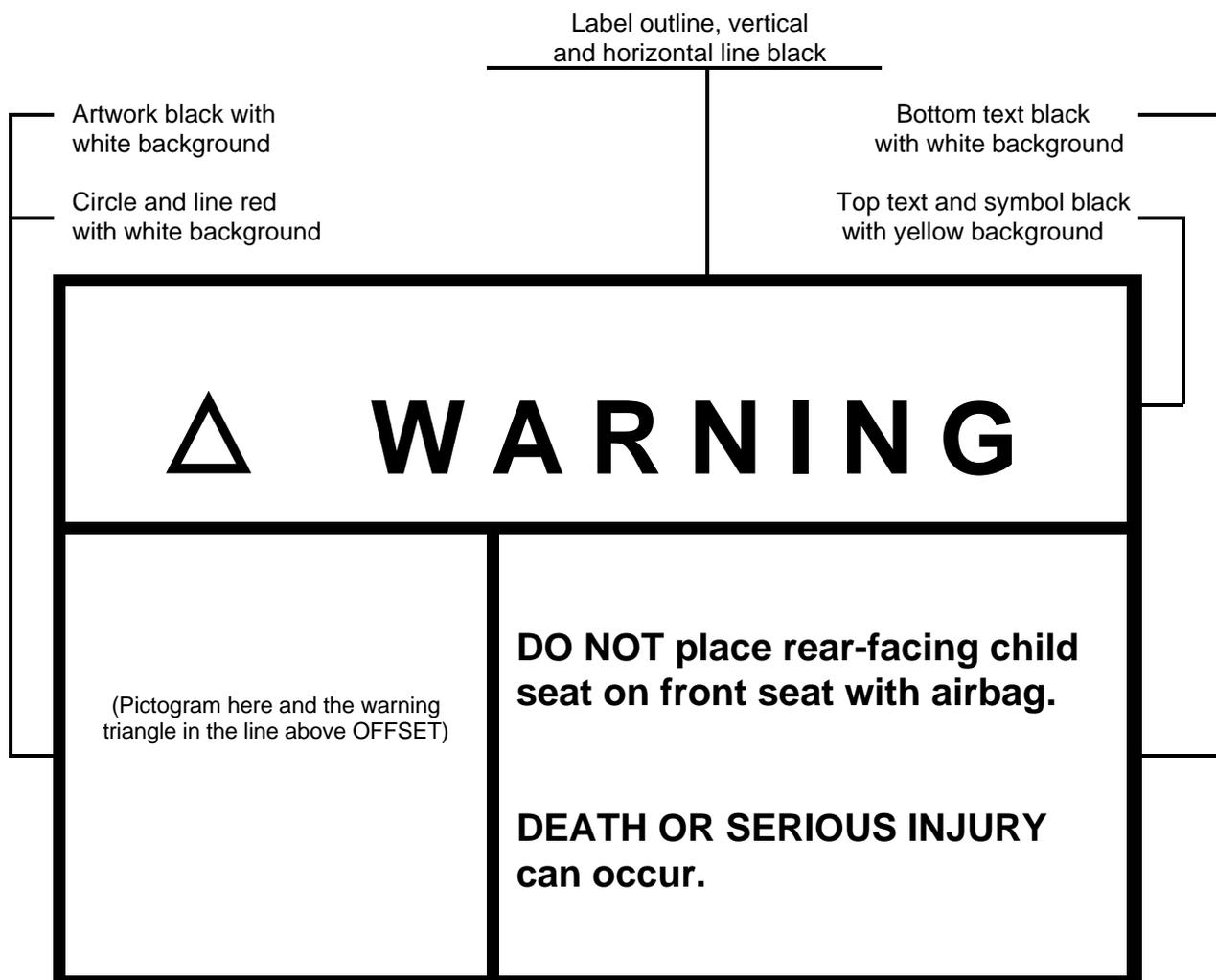
PROPOSAL FOR DRAFT SUPPLEMENT 2 TO THE 03 SERIES OF AMENDMENTS
TO REGULATION No. 44 ADOPTED BY THE MEETING OF EXPERTS

Paragraph 4.5., amend to read:

"4.5. In addition, in the immediate area where the child's head rests within the child restraint and on the visible surface of the child restraint system, rearward-facing restraints shall have the following label permanently attached (the text information shown is a minimum).

This label shall be provided in the language(s) of the country where the device is sold.

Label minimum size: 60 x 120 mm



Paragraph 16. (Transitional provisions), amend to read: (To be proposed)

Annex 6

AMENDMENTS TO THE PROPOSAL FOR A DRAFT REGULATION
CONCERNING REPLACEMENT AIRBAGS AGREED IN PRINCIPLE BY THE MEETING OF EXPERTS
(Document TRANS/WP.29/GRSP/1998/4)

Paragraph 1.2., amend to read:

"1.2. to replacement steering wheels for vehicles of categories M₁ and N₁ and to replacement steering wheels for vehicles of categories M₁ and N₁ equipped with an airbag module of an approved"

Paragraph 2.3., amend to read:

".... sub-assembly comprising the energy source for its deployment and the airbag involved in the deployment."

Paragraph 2.4., amend to read:

"2.4. "Replacement airbag system" means an aftermarket airbag system which is supplied to modify a motor vehicle, and which may vary in its functional dimensions, form, materials or operation from any original equipment airbag systems provided by the vehicle manufacturer for that motor vehicle."

Paragraph 2.7., should be deleted.

Paragraph 2.9., amend the words "airbag assembly" to read "airbag system".

Paragraphs 2.11. and 2.13., amend to read:

"...
(b) the geometry of the airbag,
(c) the material of the airbag,
...."

Paragraph 2.12., amend to read:

"2.12. Type of a replacement steering wheel means aftermarket steering wheels which do not differ in such essential respects as:

- (a) presence of an airbag,
- (b) the dimension and diameter of the steering wheel,
- (c) the form, in so far as the safety performance and the strength performance is influenced,
- (d) the material,
- (e) the type definition of an airbag module for a replacement airbag system according to paragraph 2.11. above."

Paragraph 3.1.1., delete the words "or the vehicle manufacturer".

Paragraph 3.2.2.5., amend the words "steering wheel" to read "steering wheels".

Paragraph 3.3., amend to read:

"3.3. Application for approval of a replacement airbag system other than that installed in a steering wheel

Paragraph 3.3.2.3., amend the words "airbag device(s)" to read "airbag system(s)".

Paragraph 4.1.4.1., footnote 1/, amend to read:

"1/ 1 for ..., 24 for Ireland, ... 38-39 (vacant) and 40 for The former Yugoslav Republic of Macedonia. Subsequent numbers ... to the Agreement concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts which can be fitted and/or be used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of These Prescriptions, and the numbers thus assigned"

Paragraph 4.2.1., amend to read:

"4.2.1. If a replacement steering wheel type submitted for approval meets the requirements of the relevant paragraphs 5 and 6, approval of that replacement steering wheel type shall be granted."

Paragraph 4.3.1., amend to read:

"... approval of that replacement airbag system shall be granted."

Paragraph 5.1., amend to read (including the title in the "Contents"):

"...equipped with an airbag module of an approved type or without an airbag or replacement airbag system other than those installed in an steering wheel."

Paragraph 5.1.1.2., renumber as paragraph 5.1.1.1.

Paragraph 5.1.1.3., renumber as paragraph 5.1.1.2., and amend to read:

"... or in case of a recall campaign."

Paragraphs 5.1.1.4. and 5.1.1.5., renumber as paragraphs 5.1.1.3. and 5.1.1.4.

Paragraph 5.1.3., amend to read:

"5.1.3. A complete system shall comprise a device alerting the user if the airbag system or the airbag systems are not in a working order as designed."

Paragraph 5.1.4., amend the words "flexible structure" to read "airbag".

Paragraph 5.1.5., amend to read:

"... and temperature of the gases and solid particles released on deployment of an airbag are not such as to be liable to harm ..."

Paragraph 5.2.1., add at the end the following text:

"....
The module manufacturer shall state that the above-mentioned tests were carried out with positive test results. In case of doubts the approval authority responsible for issuing the approval shall reserve the right to verify the accuracy of this statement."

Paragraph 5.3.3., correct to read:

".... the mere energy of propulsion or by using an additional propelling device."

Paragraph 5.3.10., correct the reference to "paragraph 6.2.3.1." to read "paragraph 6.2.2."

Paragraph 5.3.11., correct the reference to "paragraph 6.2.4." to read "paragraph 6.2.3."

Annex 7

AMENDMENTS TO THE PROPOSAL FOR DRAFT 05 SERIES OF AMENDMENTS
TO REGULATION No. 22 ADOPTED BY THE MEETING OF EXPERTS
(Document TRANS/WP.29/GRSP/1998/5)

Paragraph 5.1.4.1.1., footnote 3/, amend to read:

"3/ 1 for ..., 24 for Ireland, ... 29 for Estonia, 30 (vacant), 31 for Bosnia and Herzegovina, 32-36 (vacant), 37 for Turkey, 38-39 (vacant) and 40 for The former Yugoslav Republic of Macedonia. Subsequent numbers ... to the Agreement concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts which can be fitted and/or be used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of These Prescriptions, and the numbers thus assigned"

Paragraph 7.3.1.3.1., amend to read:

".... those listed in paragraph 7.3.3.2. 4/. When testing impact points B, X, P and R the helmet at an angle of 62° - [65°U] to the vertical."

Paragraph 7.3.1.4., amend to read:

"7.3.1.4. Test

The test shall be completed not more than five minutes after the helmet is taken from the conditioning chamber. Tests at point S shall be carried out after tests at points B, X, P and R. the drop height shall be equal to:

7.5 m/s (+0.15/-0.0 m/s) for both anvils specified in paragraphs 7.3.2.3.1. and 7.3.2.3.2.;

[7.0 m/s (+0.15/-0.0 m/s) for tests at point S.]"

Paragraph 7.3.4.1., amend to read:

"..... then an additional point S shall be impacted after the four other points, but only against the anvil specified in paragraph 7.3.2.3.1."

(in addition, correct the French text to read:
"... dans cet ordre. Les casques équipés du protection intégral du bas du visage sont en outre soumis à un impact")

Paragraph 7.3.4.2., amend to read:

"7.3.4.2. The points of impact are defined for each helmet:

B, in the frontal area, situated the AA' plane.

X, in either the left or right the AA' plane.

R, in the rear area, situated the AA' plane.

P, in the crown area ... and not within 500 mm of the other points.

S, in the lower face cover area, of energy absorption material.

Impacts at points B, X and R should be within 10 mm radius of the defined point.

Impacts at points P and S should be at a point within the defined area chosen by the laboratory and shall be at a different location for each size of helmet subjected to test. One of the impacts at P and one of the impacts at S shall be at a point in the centre of the defined area. The respective co-ordinates of each chosen impact point shall be recorded on or attached to the form conforming to the model in annex 1A to this Regulation."
