



11 April 2002

**Informal Document N° 2**  
(31<sup>st</sup> GRSP, 13-17 May 2002,  
agenda item 1.4)

**Draft Amendments To Regulation No. 17:**  
**(Strength of Seats)**

**A. Note :**

This document is a revision of informal document N° 20 to the 30<sup>th</sup> GRSP session. It takes into account remarks made at that GRSP session and since then. (release of attachment system, ECE R21 requirements, communication form, example of marking)  
This document should be discussed together with informal document N° 21 to the 30<sup>th</sup> GRSP session.

**B. Proposal :**

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Insert in the "CONTENTS" the headlines of new annexes 10 & 11 to read:

Annex 10 Test procedure for partitioning systems.

Annex 11 Diagram of an apparatus to test the strength of partitioning systems.

Paragraph 2.15. amend to read:

2.15. "Partitioning System" means parts or devices which in addition to the seat backs, are intended to protect occupants from displaced luggage; in particular a partitioning system may be constituted by wire mesh , netting , flexible or rigid material in an assembly, so constructed, as to restrain displaced luggage. For approval under paragraph 3.1 below, headrests fitted as standard equipment for vehicles equipped with such parts or devices shall be considered as part of the partitioning system; however, a seat, equipped with a load restraint shall not be considered as being on its partitioning system.

Insert new paragraphs 2.15.1. and 2.15.2. to read:

2.15.1. "Upper Partitioning System" ( Type A ) means parts or devices which are intended to protect the occupants from displaced luggage, which is located above the level of the seat backs in their upright position and with its lower protecting area being higher than 300 mm. above the effective floor level of the vehicle.

2.15.2. "Full Partitioning System"( Type B ) means parts or devices which are intended to protect occupants from displaced luggage where the protecting area extends largely from the vehicle roof area to its effective load floor.

Paragraph 3.1. amend to read:

3.1. Partitioning System. Vehicle Type Approval

Paragraph 3.1. renumber as paragraph 3.1.1.

Paragraph 3.2. renumber as paragraph 3.1.2.

Paragraph 3.2.1. renumber as paragraph 3.1.2.1.

Paragraph 3.2.1.1. renumber as paragraph 3.1.2.1.1.

Paragraph 3.2.2. renumber as paragraph 3.1.2.2.

Paragraph 3.2.3. renumber as paragraph 3.1.2.3.

Paragraph 3.2.3.1. renumber as paragraph 3.1.2.3.1.

Paragraph 3.2.3.2. renumber as paragraph 3.1.2.3.2.

Paragraph 3.2.4. renumber as paragraph 3.1.2.4.

Paragraph 3.2.4.1. renumber as paragraph 3.1.2.4.1.

Paragraph 3.2.4.2. renumber as paragraph 3.1.2.4.2.

Paragraph 3.3. renumber as paragraph 3.1.3.

Paragraph 3.3.1. renumber as paragraph 3.1.3.1.

Paragraph 3.3.2. renumber as paragraph 3.1.3.2.

Paragraph 3.3.3. renumber as paragraph 3.1.3.3.

Paragraph 3.3.3.1. renumber as paragraph 3.1.3.3.1.

Paragraph 3.3.3.2. renumber as paragraph 3.1.3.3.2.

Insert new paragraphs 3.2. to 3.3. to read:

3.2. Partitioning System. Component Type Approval

3.2.1. The application for approval of a type of partitioning system shall be submitted by the holder of the trade mark or by his duly accredited representative.

3.2.2. It shall be accompanied by:

3.2.2.1. a technical description of the partitioning system specifying the fabrics and rigid parts used and accompanied by drawings of the parts making up the partitioning system. The drawings must show the position intended for the approval number and the additional symbol(s) in relation to the circle of the approval mark.

The description shall specify the vehicle type(s) for which the partition system type is intended.

3.2.2.2. three samples of the partitioning system type, one of which is for reference purposes.

- 3.2.2.3. samples of fabrics used in quantities required by the technical service conducting the approval tests.
- 3.2.2.4. The technical service conducting the type-approval tests shall be entitled to request further samples.

3.3. Markings

The samples of a partition system type submitted for approval in conformity with the provisions of paragraph 3.2.2.2. , 3.2.2.3. and 3.2.2.4. above shall be clearly and indelibly marked with the manufacturer's name, initials or trade name or mark.

Paragraph 4.1. amend to read:

4.1 Partitioning System. Vehicle Type

Paragraph 4.1. renumber as paragraph 4.1.1.

Paragraph 4.2. renumber as paragraph 4.1.2.

Paragraph 4.3. renumber as paragraph 4.1.3.

Paragraph 4.4. renumber as paragraph 4.1.4.

Paragraph 4.4.1. renumber as paragraph 4.1.4.1.

Paragraph 4.4.2. renumber as paragraph 4.1.4.2.

Paragraph 4.4.3. renumber as paragraph 4.1.4.3.

Paragraph 4.5. renumber as paragraph 4.1.5.

Paragraph 4.6. renumber as paragraph 4.1.6.

Paragraph 4.7. renumber as paragraph 4.1.7.

Paragraph 4.8. renumber as paragraph 4.1.8.

Insert new paragraphs 4.2. to 4.2.6. to read :

4.2. Partitioning System. Component Type.

4.2.1. If the samples of a type of partitioning system which are submitted in conformity with the provisions of paragraph 3.2., meet the requirements of paragraph 5.16 below, approval shall be granted.

4.2.2. An approval number shall be assigned to each type approved. Its first two digits ( at present 07 corresponding to the 07 series of amendments) shall indicate the series of amendments incorporating the most recent major technical amendments made to the Regulation at the time of issue of the approval. The same Contracting Party may not assign the same number to another type of partitioning system.

- 4.2.3. Notice of approval or of extension or refusal of approval of a type partitioning system, pursuant to this Regulation, shall be communicated to the Parties to the 1958 Agreement which apply this Regulation by means of a form conforming to the model in annex 1B to the Regulation.
- 4.2.4. There shall be affixed, conspicuously and in a readily accessible place specified on the approval form, to every partitioning system confirming to a type approved under this Regulation, an international approval mark consisting of :
- 4.2.4.1. a circle surrounding the letter "E" followed by the distinguished number of the country which has granted approval 3);
- 4.2.4.2. the number of this Regulation, followed by the letter "R", a dash and the approval number, to the right of the circle prescribed in paragraph 4.2.4.1.
- 4.2.4.3. the letter "A" for an upper partitioning system, the letter "B" for a full partitioning system.
- 4.2.5. The approval mark shall be clearly legible and be indelible.
- 4.2.6. Example of arrangement of approval mark is given in annex 2.A. to this Regulation.

Paragraph 5.15.2. amend to read :

5.15.2 Partitioning System. Vehicle Type Approval

At the request of the vehicle manufacturer etc ...  
.....

Insert new paragraph 5.16. to read :

5.16. Partitioning System. Component Type Approval

- 5.16.1 Partitioning systems, when tested in accordance with the requirements of paragraph 6.10. must withstand sufficient forces to demonstrate their ability to protect occupants from displaced luggage during frontal impacts. The requirement is deemed to be met if the extension of the test load applicator(s), beyond the point where it (they) first contacts the partitioning system, is less than 200mm. The partitioning system should not break away from any of its anchorages. Individual strands of netting etc. can fracture but the test load applicator cannot pass through the partitioning system. After the test no sharp edges of ridged parts may be contactable.
- 5.16.2 The method of attachment, or adjustment, of the partitioning system, if present, must be so configured as to preclude the release of the attachment system due to the forces generated by an acceleration of 20 g with a duration of 30 ms. applied in any direction corresponding to the components' forward direction, when mounted in its

intended installed position. Proof of conformity, if deemed to be required by the authority granting type-approval, after appraisal of the partitioning system approval applicant, must be provided by the partitioning system applicant. This proof may be in the form of results from dynamic tests of the specific component in question or by calculation.

- 5.16.3 The assembled partitioning system shall not contain any dangerous roughness or sharp edges likely to damage the components of the partitioning system or likely to increase the risk of serious injury to occupants. Rigid components with material of greater than 50 Shore A hardness must have surfaces that terminate in rounded edges the radius of curvature being not less than 3,2 mm.

Insert new paragraphs 6.10. , 6.10.1. and 6.10.2. to read :

- 6.10. Tests for checking the strength of partitioning systems.
- 6.10.1. In the case of an upper partitioning system (Type A) that does not extend to within 300mm. of the effective vehicle load floor in its proposed installed position it must be tested in accordance with the test procedure described in annex 10, paragraph 1.
- 6.10.2 In the case of a full partitioning system ( Type B ) which extends to within 300 mm. of the effective vehicle load floor in its proposed installed position it must be tested in accordance with the test procedure described in annex 10, paragraph 2.

Paragraph 7.1. amend to read :

- 7.1. Every vehicle or partitioning system approved pursuant  
..... etc.

Paragraph 7.2. amend to read :

- 7.2. ....on serially-manufactured vehicles  
and/or partitioning systems in respect to the  
requirements set out in paragraph 5. above.

Paragraph 8.1. amend to read :

- 8.1. .... with or if the vehicles or  
partitioning systems fail in the checks prescribed in  
Paragraph 7.1. above.

Paragraph 9. amend to read:

9. ....AND/OR THEIR HEAD  
RESTRAINTS OR PARTITIONING SYSTEM.

Paragraph 9.1. amend to read:

- 9.1. Every modification of the vehicle type with respect to the seats, their anchorages and/or their head restraints or the partitioning system shall be notified .....  
.....etc.

Paragraph 9.1.1. amend to read:

- 9.1.1. .... in any event the vehicle or partitioning system still complies with the requirements; or

Insert new paragraphs 11.2 , 11.3. , 11.3.1. and 11.3.2. to read:

- 11.2. In the case of a partitioning system supplied separately from a vehicle the packaging and instructions must clearly state the vehicle type(s) for which it is intended.
- 11.3. Every partitioning system shall be accompanied by instructions of the following content or kind in the language or languages of the country in which it is to be placed on sale.
- 11.3.1. Installation instructions which specify for which vehicle models or class of models the assembly is suitable and the correct method of attachment of the assembly to the vehicles.
- 11.3.2. User instructions which specify the instructions to ensure the user obtains the maximum benefit from the partitioning system. In these instructions reference shall be made to:
- a) The importance of using the partitioning system on all journeys where luggage is transported.
  - b) The correct adjustment and positioning of the partitioning system.
  - c) Method of operating any adjustment system incorporated in the partitioning system.
  - d) The mass of transported luggage that the partitioning system is designed to restrain.



Annex 1B

(maximum format : A4 (210 x 297 mm ))

COMMUNICATION

Issued by : Name of administration.

.....  
.....  
.....



.....

- concerning: 2/ APPROVAL GRANTED  
 APPROVAL EXSTENDED  
 APPROVAL REFUSED  
 APPROVAL WITHDRAWN  
 PRODUCTION DEFINITELY DISCONTINUED

of a type of partitioning system for the protection of occupants from displaced luggage in power- driven vehicles pursuant to Regulation No.17

Approval No. .... Extension No. ....

1. Partioing system of type Upper partitioning system (Type A) / Full partitioning system (Type B) 3/ .....
2. Trade name or mark .....
3. Manufacturer`s designation of the type of partitioning system. ....  
.....
4. Manufacturers name .....
5. If applicable, name of his representative .....
6. Address .....
7. Submitted for approval on .....
8. Technical service responsible for conducting approval tests .....
9. Date of test report issued by that service .....
10. Number of test report issued by that service .....
11. Approval granted / refused / withdrawn 2/ for general use / for use in a particular types of vehicle / for use in a particular vehicle
12. Position and nature of the marking .....
13. Place .....
14. Date .....

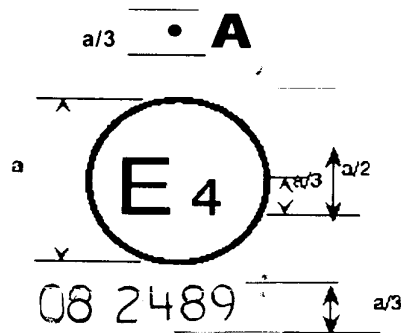
15. Signature . . . . .
16. Annexed to this communication is a list of documents in the approval file deposited at the administration services having delivered the approval and which can be obtained upon request.

- 1/ Distinguishing number of the country which has granted / extended / refused / withdrawn approval ( see approval provisions in the Regulation ).
- 2/ Strike out what does not apply.
- 3/ Indicate which type.

Annex 2B

ARRANGEMENT OF THE APPROVAL MARK

1. Arrangement of the partitioning system approval marks ( see paragraphs 4.2.4.1. and 4.2.5. of this regulation.



The partitioning system bearing the above approval mark is an upper partitioning system ( `A` ) and approved in the Netherlands ( `E4` ) under the number 08 2489, the Regulation already incorporating the 08 series of amendments at the time of approval.

NOTE: The approval number and additional symbol(s) must be placed close to the circle and either above or below the `E` or to the left or right of that letter. The digits of the approval number must be on the same side of the `E` and orientated in the same direction. The additional symbol(s) must be diametrically opposite the approval number. The use of roman numerals as approval numbers should be avoided so as to prevent confusion with other symbols.



Annex 10.

Test Procedure For Partitioning Systems

The partitioning system must be attached to a substantially rigid frame with the attachment hardware supplied by the manufacturer. At the discretion of the technical service performing the test the attachment points A,B,C and D should replicate the geometry of the intended vehicle attachment points or the worst case positions of the proposed installation positions recommended by the partitioning system manufacturer. All attachment straps and hardware etc. should be fitted in accordance with the manufacturer's instructions. See figure 1 and 2.

1. Upper Partitioning Systems ( Type A ) Load Application. Referring to figure 1 The test load applicator consists of a rigid panel 500mm. X 125mm. with all edges and corners rounded to a radius of 20mm. This is positioned relative to the partitioning system as shown in figure 1 and a static force increasing to 400 daN is applied to the partitioning system at a speed of application not less than 100mm. per minute. When the prescribed load is reached the force is released.
  
2. Full Partitioning System ( Type B ) Load Application. Referring to figure 2 The upper test load applicator E consists of a rigid panel 500mm.X 125mm. with all edges and corners rounded to a radius of 20mm. This is positioned relative to the partitioning system as shown in figure 2. The lower test load applicator F consists of a rigid panel 650mm. X 300mm. with all edges and corners rounded to a radius of 20mm. This is positioned relative to the partitioning system as shown in figure 2. Simultaneously the load applicators E and F are to be pressed into the partitioning system until the force applied to the upper applicator E reaches a value of 400 daN and the force applied to the lower applicator F reaches 1,440 daN. When the load of each applicator reaches its maximum value the load is to be released. The speed of application of the load is to be not less than 100mm. per minute in all cases.



Figure 1

Annex 10

Upper Partitioning System

Test load configuration

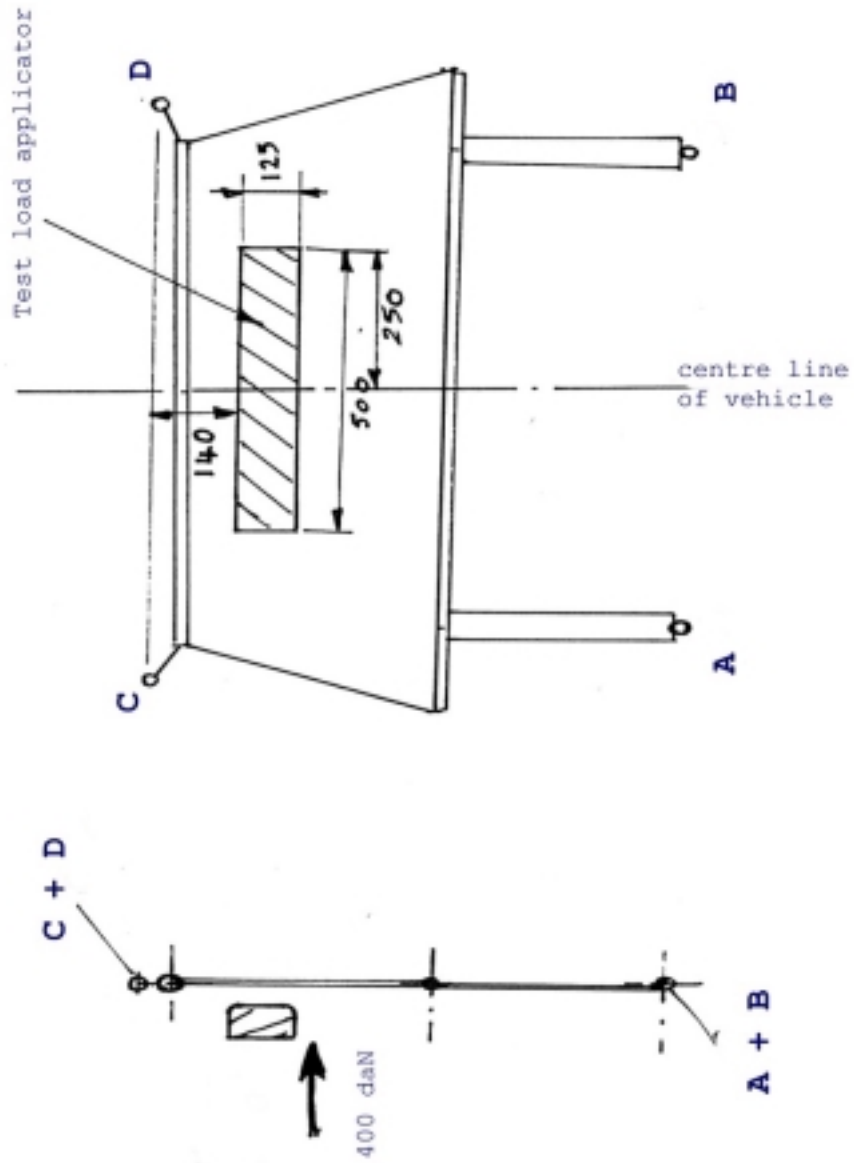


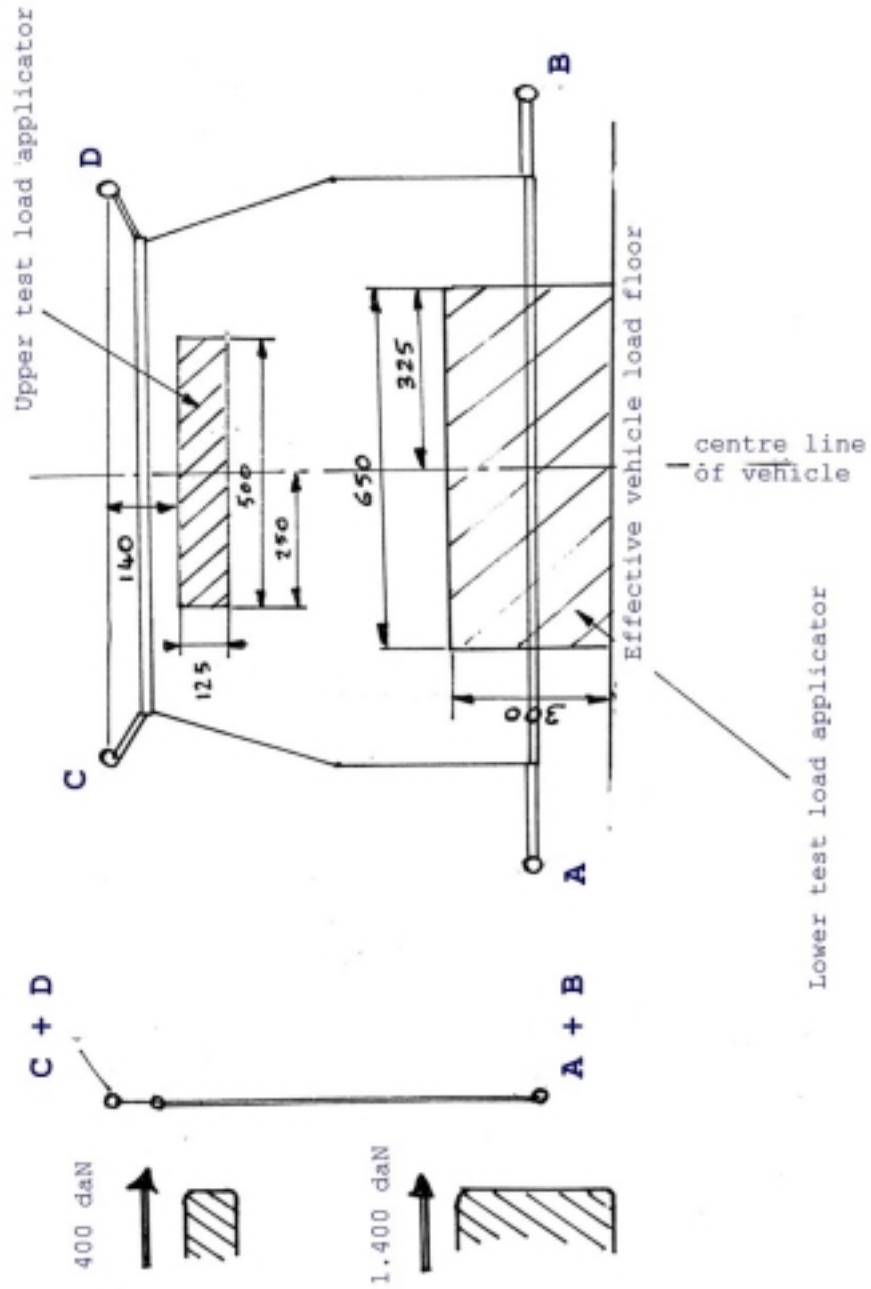


Figure 2

Annex 10

Full Partitioning System

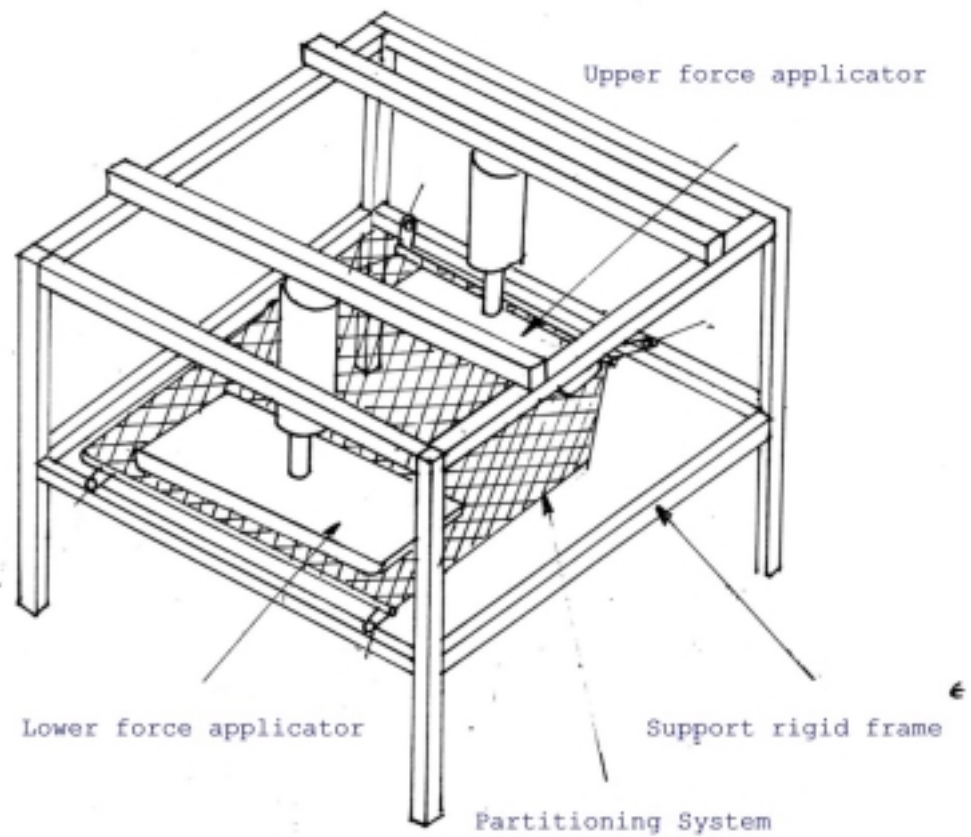
Test load configuration





Annex 11

Diagram of an apparatus to test  
the strength of partitioning systems



**C. Consideration and justification of Proposal for Amendments to Regulation No 17.**

Consideration

The status of the partitioning system in the vehicle is somewhat confusing at this moment. Partitioning systems are only added in the Regulation nr 17, which controls the strength of seat backs.

A vehicle may be granted homologation when the seats are tested with a partitioning system fitted, if this system is supplied as standard equipment. However there are no separate specifications as to the strength of the partitioning system or its anchorages. The partitioning system that is used during homologation must be identical in all future production.

Furthermore, where a partitioning system is fitted as an option or as an after market addition to a vehicle, there is no way that the user can be sure that the product will perform as required.

A practical concern is that the manufacturers of partitioning systems can only prove the conformity of their systems to the Regulation by a full dynamic test on the vehicle, complete with seats. Besides the fact that it is almost impossible for a supplier to arrange a full scale dynamic vehicle test, this supplier does not have any control on the body attachments in the vehicle to secure the partitioning system.

All this considered means that we are of the opinion that there is a need to prepare separate static specifications for partitioning systems as an addition to Regulation nr 17.

Justification

We justify our proposal to amend Regulation nr 17 as follows:

1. there is no doubt that the installation of partitioning systems, between the luggage area and the passengers in motor vehicles, with seatbacks up-right or folded down, reduces or eliminates injuries, caused by displaced luggage during a frontal impact.
2. according to the actual Regulation nr 17, partitioning systems will only be tested in case the vehicle manufacturer supplies such a system as standard equipment.

3. In the majority of vehicles however the vehicle manufacturer provides for attachment points for a partitioning system, but, mainly for commercial reasons, partitioning systems are not always supplied as standard equipment.
4. this means that the users who want to buy a partitioning system as an accessory or as an option, will not be assured of the technical abilities (safety) of such a system, since there is no need to comply with any specification.
5. In our opinion the user of a vehicle should have the possibility to purchase and install a (safe) partitioning system at any point during the lifetime of a vehicle.
6. the only way to assure the user that he installs a safe product, is to subject this product to comparable technical requirements as required by regulation (addition of static component requirements to Regulation 17)
7. A comparison can be made with the Regulations on safety belts (Regulation No. 16), which are also tested as separate components, and not only as an integral part of a vehicle.