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### ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

Working Party on the Construction of Vehicles

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PROPOSAL FOR DRAFT SUPPLEMENT 1 TO THE 05 SERIES OF  
AMENDMENTS TO REGULATION No. 14

(Safety-belt anchorages)

Transmitted by the Working Party on Passive Safety (GRSP)

Note: The text reproduced below was adopted by GRSP at its twenty-sixth session and is transmitted to WP.29 and to AC.1 for consideration. It is based on the text of document TRANS/WP.29/GRSP/1999/3/Rev.1, as amended (TRANS/WP.29/GRSP/26, annex 2).

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Paragraph 2.2., amend to read:

" ...the anchorages are attached and, if the anchorages strength is tested according to the dynamic test, the characteristics of any component of the restraint system, especially the load limiter function, having an influence on the forces applying to the safety-belt anchorages."

Insert a new paragraph 2.16., to read:

"2.16.     "Thorax load limiter function"

Any part of the safety-belt and/or the seat and/or the vehicle intended to limit the level of the restraint forces applying to the occupant thorax in case of a collision."

Insert a new paragraph 3.2.5., to read:

"3.2.5.     evidence that the safety-belt or the restraint system used in the anchorages approval test complies with Regulation No. 16, in the case where the car manufacturer chooses the alternative dynamic strength test."

Paragraph 4.1., amend to read:

"4.1.       If the vehicle submitted for approval pursuant this Regulation meets the relevant requirements of this Regulation, approval for that vehicle type shall be granted."

Insert a new paragraph 4.4.3., to read:

"4.4.3.     the letter "e", to the right of the number of this Regulation in the case of type approval according to the dynamic test of annex 7."

Insert a new paragraph 6.5., to read:

"6.5.       In the case of a group of seats as described in paragraph 1. of annex 7, the dynamic test of annex 7 can be performed, at the option of the car manufacturer, as an alternative to the static test prescribed in paragraphs 6.3. and 6.4."

Paragraph 7., amend to read:

" ... AFTER THE STATIC TESTS"

Insert new annexes 7. and 8, to read:

"Annex 7  
DYNAMIC TEST AS AN ALTERNATIVE TO THE SAFETY-BELT ANCHORAGES  
STATIC STRENGTH TEST

1. SCOPE

This annex describes a dynamic sled test that can be performed as an alternative to the safety-belt anchorages static strength test prescribed in paragraphs 6.3. and 6.4. of this Regulation.

This alternative can apply at the request of the car manufacturer in the case of a group of seats where all the seating positions are equipped with 3-point safety-belts to which thorax load limiter functions are associated and when the group of seats additionally comprises a seating position for which the upper safety-belt anchorage is located on the seat structure.

2. PRESCRIPTIONS:

- 2.1. In the dynamic test prescribed in paragraph 3. of this annex, there shall be no rupture of any anchorage or surrounding area. A programmed rupture necessary for the functioning of the load limiter device is however permitted.

The minimum spacings for the effective lower anchorages specified in paragraph 5.4.2.5. of this Regulation, and the requirements for the effective upper anchorages specified in paragraph 5.4.3.6. of this Regulation and, when applicable, completed by the following paragraph 2.1.1., shall be respected.

- 2.1.1. For vehicles of category M1 of a total permissible mass not exceeding 2.5 tonnes, the upper safety-belt anchorage, if attached to the seat structure, shall not be displaced forward of a transverse plane passing through the R-point and point C of the seat in question (see figure 1 of annex 3 to this Regulation).

For vehicles other than mentioned above, the upper safety-belt anchorage shall not be displaced forward of a transverse plane inclined 10° in forward direction and passing through the R-point of the seat.

- 2.2. In vehicles where such devices are used, the displacement and locking devices enabling the occupants of all seats to leave the vehicle must still be operable by hand after the test.
- 2.3. The vehicle owner's manual shall include indications that each safety-belt shall only be replaced by an approved safety-belt for the considered seating position in the vehicle, and shall in particular identify those seating positions which may only be fitted with an appropriate safety-belt equipped with a load limiter.

3. DYNAMIC TEST CONDITIONS

3.1. General conditions

The general conditions described in paragraph 6.1. of this Regulation apply to the test described in this annex.

3.2. Installation and preparation

3.2.1. Sled

The sled must be so constructed that no permanent deformation appears after the test. It must be so guided that, during the impact phase, the deviation does not exceed 5° in the vertical plane and 2° in the horizontal plane.

3.2.2. Securing of the vehicle structure

The part of the vehicle structure considered essential for the vehicle rigidity regarding the seat anchorages and the safety-belt anchorages shall be secured on the sled, according to the disposals described in paragraph 6.2. of this Regulation.

3.2.3. Restraint systems

- 3.2.3.1. The restraint systems (the complete seats, the safety-belt assemblies and the load limiter devices) shall be mounted on the vehicle structure according to the series production vehicle specifications.  
The vehicle environment facing the tested seat (dashboard, seat, etc., depending on the tested seat) can be mounted on the test sled. If there were a frontal airbag, it has to be deactivated.
- 3.2.3.2. At the request of the car manufacturer and in agreement with the technical service in charge of the tests, some components of the restraint systems other than the complete seats, the safety-belt assemblies and the load limiter devices, may not be mounted on the test sled or may be replaced by components having equivalent or lower stiffness and whose dimensions are comprised in the vehicle interior fittings dimensions, provided that the tested configuration is at least as unfavourable as the series configuration regarding the forces applying to the seat and safety-belt anchorages.

3.2.3.3. The seats shall be adjusted as required in paragraph 6.1.2. of this Regulation, in the position for use chosen by the technical service in charge of the tests as the one giving the most adverse conditions regarding the anchorages strength and compatible with the installation of the dummies in the vehicle.

3.2.4. Dummies

A dummy whose dimensions and mass are defined in annex 8 shall be positioned on each seat and restrained by the safety-belt provided in the vehicle.

No dummy instrumentation is required.

3.3. Test

3.3.1. The sled shall be so propelled that, during the test, its speed variation is 50 km/h. The sled deceleration shall be within the corridor specified in annex 8 of Regulation No. 16.

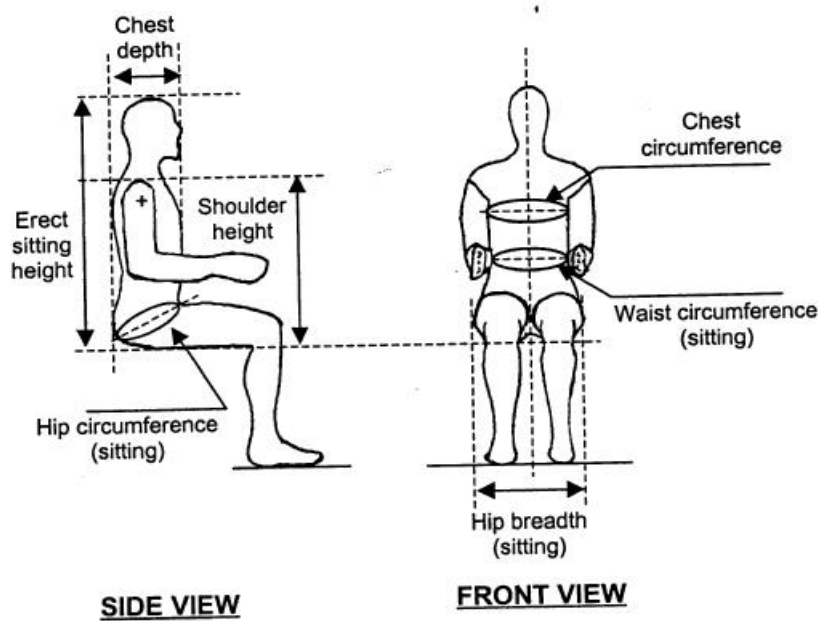
3.3.2. If applicable, the activation of additional restraining devices (preloading devices, etc., except airbags) is triggered according to the car manufacturer's indications.

3.3.3. It shall be checked that the safety-belt anchorages' displacement does not exceed the limits specified in paragraphs 2.1. and 2.1.1. of this annex.

Annex 8  
DUMMY SPECIFICATIONS \*/

Mass	97.5 ± 5 kg
Erect sitting height	965 mm
Hip breadth (sitting)	415 mm
Waist circumference (sitting)	1200 mm
Chest depth	265 mm
Chest circumference	1130 mm
Shoulder height	680 mm
Tolerance on all length dimensions	± 5 per cent

Remark: a sketch explaining the dimensions is given in the figure below



\*/ Devices described in rules Australian Design Rule (ADR) 4/03 and Federal Motor Vehicle Safety Standard (FMVSS) No. 208 are considered equivalent"