

Proposal for Supplement 4 to the 08 series of amendments to Regulation No. 17 (Strength of seats)

Submitted by the expert from the expert from the European Association of Automotive Suppliers*

The text reproduced below was prepared by the expert from the European Association of Automotive Suppliers (CLEPA), to clarify the testing of seats with and without head restraints. The modifications to the current text of the Regulation are marked in bold for new or strikethrough for deleted characters.

I. Proposal

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Paragraph 5.2.7. amend to read:

5.2.7. After the tests, the displacement systems intended for permitting or facilitating the access of occupants shall be in working order; they shall be capable, at least once, of being unlocked and shall permit the displacement of the seat or the part of the seat for which they are intended.

Any other displacement systems, as well as adjustment systems and their locking systems are not required to be in working order.

In the case of seats provided with head restraints, the strength of the seat-back and of its locking devices is deemed to meet the requirements set out in paragraph 6.2. when, after testing in accordance with paragraph 6.4.3.6 below., no breakage of the seat or seat-back has occurred: otherwise, it shall be shown that the seat is capable of meeting the test requirements set out in paragraph 6.2. below.

In the case of seats (benches) with more places to sit than head restraints and in case the manufacturer chooses not to apply 53 daNm during the test of paragraph 6.4., the seat back strength test of para. 6.2. has to be performed in addition to the test of para. 6.4. ~~the test described in paragraph 6.2. below shall be carried out.~~

Paragraphs 6.4.3.2. and 6.4.3.3., amend to read:

"6.4.3.2. The displaced reference line is determined by applying to the part simulating the back of the manikin referred to in Annex 3 to this Regulation an initial force producing a rearward moment of 37.3 daNm about the R point. **In the case of simultaneous testing of bench seats, the rear ward moment shall be applied to all seating positions of the bench simultaneously,**

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* In accordance with the programme of work of the Inland Transport Committee for 2016–2017 (ECE/TRANS/254, para. 159 and ECE/TRANS/2016/28/Add.1, cluster 3.1), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

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irrespective of this position being equipped with or without head restraint.

- 6.4.3.3. By means of a spherical headform 165 mm in diameter an initial force producing a moment of 37.3 daNm about the R point is applied at right angles to the displaced reference line at a distance of 65 mm below the top of the head restraint, the reference line being kept in its displaced position in accordance with paragraph 6.4.3.2. above. **In the case of simultaneous testing of bench seats, the force shall be applied to all head restraints as present on the bench seats simultaneously.**

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Paragraphs 6.4.3.6., amend to read:

- "6.4.3.6. To check the effectiveness of the head restraint, the initial load specified in paragraphs 6.4.3.3. and 6.4.3.3.2. is **subsequently** increased to 89 daN unless the breakage of the seat or seat-back occurs earlier. **At the request of the manufacturer the load of paragraph 6.4.3.2. is increased simultaneously to 53 daNm for seating positions without head restraints only to allow simultaneous compliance with paragraphs 5.15. and 6.2.**"

II. Justification

1. The head restraint performance test of paragraph 6.4. is not performed in the same way in the different type approval laboratories when bench seats with seating positions with and without head restraints are tested. This proposal aims to harmonize the testing procedures allowing alternatives at the request of the manufacturer.
2. Simultaneous testing of a bench seat with three seating positions and two head restraints; in this proposal it is clarified that a moment of 3 x 373Nm shall be applied to the back of seats and 2 x 373Nm to the head restraints:
 - (a) If the manufacturer wants to comply with the test requirements of paragraph 6.2. (strength of the seat-back), by the test of head restraint performance of paragraph 6.4., they choose to apply 53 daNm to each seat back without head restraint and 89 daN to each head restraint. In this case only one test shall be performed.
 - (b) If the manufacturer chooses not to apply 53 daNm, during the test of paragraph 6.4., the seat back strength test of paragraph 6.2. has to be performed in addition to the test of paragraph 6.4.