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

Submitted by 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.

* 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.
I. Proposal

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, the rear moment will be applied to each seating position 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, the moment will be applied to each head restraint."

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 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.