

Modifications to ECE/TRANS/WP.29/GRSP/2025/27* and ECE/TRANS/WP.29/GRSP/2025/44

The text reproduced below was prepared by the experts from France and the European Association of Automotive Suppliers (CLEPA). It aims to correct and clarify the text of the regulation, and to modify the current wording which creates misunderstandings and a non-harmonized application of the regulation by technical services.

The base proposal was initially submitted by France to the 77th session GRSP as informal document GRSP-77-24. This proposal was then reproduced as ECE/TRANS/WP.29/GRSP/2025/27 for the 78th session. It also incorporates amendments proposed by CLEPA in ECE/TRANS/WP.29/GRSP/2025/44, with some modifications.

The amendments apply to the 10, 11 and 12 series of amendments. It is therefore a proposal for supplement 1 to the 10 series of amendments, supplement 2 to the 11 series of amendments and supplement 1 to the 12 series of amendments to UN Regulation No. 17 (Strength of seats, their anchorages and head restraints).

Amendments to the current text of UN Regulation No.17 are marked in bold for new or strikethrough for deleted characters. Amendments to ECE/TRANS/WP.29/GRSP/2025/44 are marked in blue.

I. Proposal

Paragraph 2.13., amend to read:

“2.13. *“Head restraint” means at any designated seating position, a device that limits rearward displacement of a seated occupant's head relative to the occupant's torso and that has a height equal to or greater than 700 mm at ~~any~~ at least one point between two vertical longitudinal planes passing at 85 mm on either side of the ~~torso line~~ longitudinal vertical plane passing through the R-point, in any position of backset and height adjustment, as measured in accordance with Annex 10.”*

Paragraph 5.5.1.2., amend to read:

“5.5.1.2. Parts of the front and rear faces of head restraints situated in area 2, as defined in paragraph 6.8.1.2. below, shall be so padded as to prevent any direct contact of the head with the components of the structure and shall meet the requirements of paragraph 5.2.4. above applicable to the rear parts of seats situated in area 2. When paragraph 5.2.4.2. is used for front faces of head restraints the energy dissipation test shall be conducted according to Annex 12. In the case of head restraints integrated with the seat back, the front face of the head restraint is considered as the area located above a plane perpendicular to the reference line at 540 mm from the R point and between two vertical longitudinal planes at 85 mm on either side of the ~~reference line~~ longitudinal vertical plane passing through the R-point.”

Paragraph 5.6.3., amend to read:

“5.6.3. When measured in accordance with Annex 4, the lateral width of a head restraint shall be not less than 85 mm on either side of the ~~torso line~~ longitudinal vertical plane passing through the R-point (distances L and L').”

Paragraph 6.4., amend to read:

“6.4. ~~Test of the performance of the head restraint~~ **Displacement and Strength Test of head restraint**”

* Proposal for supplement 1 to the 10 series of amendments, supplement 2 to the 11 series of amendments and supplement 1 to the 12 series of amendments to UN Regulation No. 17 (Strength of seats, their anchorages and head restraints)

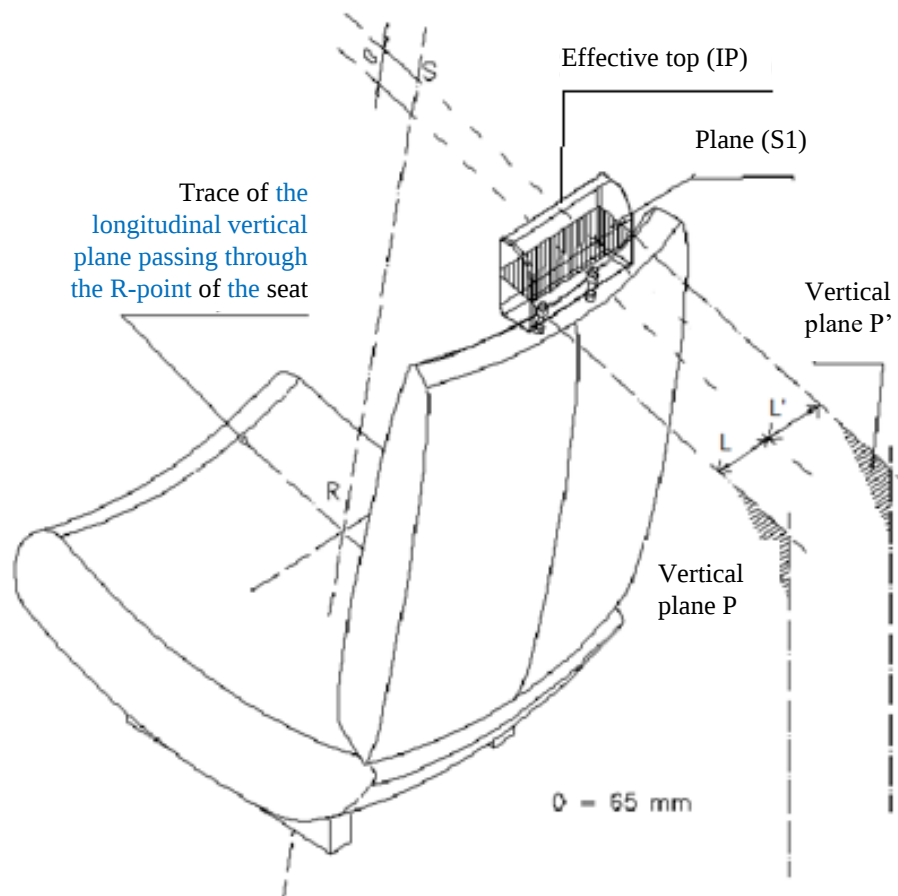
Paragraph 6.4.3., amend to read:

- “6.4.3. Test for determining rearward displacement for the head restraint **and strength of head restraint and its anchorages is described in Annex 5 to this regulation.**”

Annex 4, paragraph 2.4., amend to read:

- “2.4. Measure the distances L and L' in the plane S1 between the vertical longitudinal planes *) passing through the ~~torso-line~~ **longitudinal vertical plane passing through the R-point** and the planes P and P'.”

Annex 4, figure 4-1, amend to read:



Annex 6, paragraphs 1.4.2.1. to 1.4.2.2., amend to read:

- “1.4.2.1. ~~For the front face, the direction of impact from the front towards the rear shall be horizontal in a longitudinal plane.~~

For the rear face, the direction of impact from the rear towards the front shall be in a longitudinal plane at an angle of 45° from the vertical.

- 1.4.2.2. The ~~front and rear zones are respectively~~ bounded by the horizontal plane tangential to the **horizontal** top of the head restraint ~~as determined in paragraph 6.5. as shown in figure 10-4 of this Regulation.~~”

Annex 8, paragraph 2.3., amend to read:

- “2.3. The area of measurement is **on the front face of the head restraint**, anywhere between two vertical longitudinal planes passing at 85 mm on either side of the ~~torso-line~~ **longitudinal vertical plane passing through the R-point** and above the top of the seat back at a height greater than 540 mm.”

Annex 8, notes under figures 8-1 and 8-2, delete “, without exerting any load”.

Annex 11, paragraph 2. to 2.1., amend to read:

- “2. Demonstrate compliance with paragraph 5.6.6. by measuring the R-point backset of the head restraint based on the usage of apparatus that facilitates the measurement of coordinates ~~and for its dimensions is based on Figure 10-2 of Annex 10.~~ **The H-Point machine itself is not placed on the seat during this measurement.**
- 2.1. Adjust the seat such that its H-point coincides with the R-point **and the seat back to its design angle**, in accordance with the following requirements”

Annex 11, paragraph 2.2., delete.

Annex 11, renumber paragraphs 2.3. to 2.6. as 2.2. to 2.5.

Annex 11, paragraph 2.5. (renumbered), at the end, add “All measurements shall be taken in the longitudinal vertical plane passing through the R-point.”

Annex 12, paragraph 3.3.2., amend to read:

- “3.3.2. Impact the front surface of the seat or head restraint at any point with a height greater than 635 mm from the R-point and within a lateral distance **of 70 mm** from the **longitudinal vertical plane passing through the R-point head restraint vertical centreline of 70 mm** and measure the acceleration.”

Annex 15, paragraph 5.1., amend to read:

- “5.1. Place the head restraint into any position meeting the requirements of paragraph 5.6.42. of this Regulation;”

II. Justification

1. Before the 10 series of amendments, the test procedures for checking energy dissipation on the head restraint for the front face and for the rear face were defined in Annex 6 to UN Regulation No. 17.
2. Since the 10 series of amendments, the test procedure for checking energy dissipation on the head restraint has been split between Annex 6 and Annex 12: Annex 6 covers the test procedure for checking energy dissipation on the head restraint for the rear part and Annex 12 covers the energy absorption test procedure for head restraint from the front. However, Annex 6 was not correctly updated and references to the front part of the head restraint remain. This proposal aims at correcting this annex.
3. In the 09 series of amendments, some test procedure were detailed in part 6 of the regulation while others were detailed in the Annexes.
4. In the 10 series of amendments, all the test procedures which were previously detailed in part 6 of the regulation were transferred to annexes and the appropriate annex number was called up in each paragraph of part 6 of the regulations.
5. When the update was made, the test procedure for “Displacement and strength” was transferred from paragraph 6.4.3. to Annex 5 of the regulation, but Annex 5 is not referred anymore on paragraph 6.4.3. This proposal aims at correcting paragraph 6.4.3. to clarify the regulation.
6. Moreover the title of paragraph 6.4. (Test of the performance of the head restraint) can be misleading, because the term “performance” is used in several other contexts (paragraph 5.6. Performance Requirements, paragraph 5.7. Static Performance Requirements, Annex 14 Dynamic Performance Test Procedure), and was modified to clarify its reference to Annex 5.
7. In Annex 4 to this regulation, the Minimum Width Measurement Test Procedure is defined. Figure 4-1 was updated between the 09 and 10 series of amendments but some information is missing on the figure, including effective top. The figure was updated accordingly.
8. Annex 8 to this regulation defines the test procedure for Gap Measurement using a Sphere. Figure 8-1 and Figure 8-2 requests to make the measure without exerting any load,

whereas paragraph 2.4 requests “Applying a load of no more than 5 N against the area of measurement”, which leads to an inconsistency. This amendment aims at correcting this inconsistency by modifying figure 8-1 and 8-2.

9. Furthermore, in the 09 series of amendments to this regulation, it was requested to measure the gap from the front face of the head restraint (“§6.7.1. The distance "a" shall be determined for each gap and in relation to the front face of the head restraint, by means of a sphere having a diameter of 165 mm.”). But this wording has disappeared between the 09 and 10 series of amendments to this regulation. We propose to reintegrate this information in the test procedure for more clarity.

10. Annex 11 to this regulation defines the backset measurement procedure. Paragraph 2. of the annex requests to “Demonstrate compliance with paragraph 5.6.6. by measuring the R-point backset of the head restraint based on the usage of apparatus that facilitates the measurement of coordinates and for its dimensions is based on Figure 10-2 of Annex 10.”, which is not clear concerning the dimensions, because figure 10-2 corresponds to effective height. To clarify the test, this proposal aims at suppressing the mention “and for its dimensions is based on Figure 10-2 of Annex 10.”

11. In addition, Annex 11 requests to adjust the seat back to its design angle, after evaluating the actual torso angle (§2.1.1. Relationship between the H-point and the R-point). The proposal aims at correcting this inconsistency, by requesting to adjust the seat back to its design angle before checking the torso angle.

12. In “10° Change in Actual Torso Angle” test procedure of Annex 15 to UN Regulation No. 17, paragraph 5.6.1. is referred instead of paragraph 5.6.2. The text was corrected accordingly.

13. Since the 10 series of amendments, some test procedures are referenced to the torso line whereas the majority is referenced to the longitudinal vertical plane passing through the R-point or to the reference line. In order to harmonize the set ups of all tests we propose to substitute the wording torso line in test procedures by the term ‘longitudinal vertical plane passing through the R-point’ in Regulation No. 17.

14. During the creation of UN Global Technical Regulation No. 7 it was understood that the following principle shall be applied to decide if a head restraint is present or not in the vehicle: in the case that seat trim is present at a height over 700 mm at least one point within +/- 85 mm from a longitudinal median plane of the seat, then it should be considered that a head restraint is present and that this head restraint needs to comply with the requirements of this regulation. The proposal to develop a UN Global Technical Regulation concerning head restraints (ECE/TRANS/180/Add.7, Appendix 1) explains this principle in paragraphs 33 and 36. The definition of head restraint and the wording ‘any’ gave another meaning than intended and it is therefore proposed to align to the principle explained.
