

Proposal for amendments to document **ECE/TRANS/WP.29/GRSP/2018/10**

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I. Proposal

Appendix 1

Paragraphs 1.1.2.2.2–1.1.2.2.3 renumber as paragraphs *1.1.2.2.3–1.1.2.2.4*.

Insert new *paragraph 1.1.2.2.2*, to read:

"1.1.2.2.2 value of the bending moment of the neck along the lateral axis shall not exceed 57 Nm when stretched";

Paragraphs 2.1.1 amend to read:

"2.1. The seat to be tested shall be mounted:

2.1.1. ~~Either~~ on a testing platform representative of the body of a vehicle **if the test is carried out in accordance with paragraph 1.1 b)"**

Do not delete *paragraph 2.1.2* and amend to read:

"2.1.2 ~~Or~~ on a rigid testing platform **if the test is carried out in accordance with paragraph 1.1 a)"**

Paragraphs ~~2.1.2. and~~ 2.2., shall be deleted

Paragraphs 2.3. to 2.7., renumber as paragraphs 2.2. to 2.6.

Paragraphs 3.1., amend to read:

"3.1. Test 1

3.1.1. The testing platform shall be mounted on a trolley. If applicable, the seats shall be attached to the testing platform with the torque specified by the manufacturer."

Paragraph 3.2 amend to read:

Auxiliary seat

For the tests carried out in accordance with paragraph 1.1.a) the auxiliary seat may be of the same type as the seat being tested and shall be located parallel to and directly behind the seat being tested. The two seats shall be at the same height, adjusted identically, a seat spacing shall be chosen by the manufacturer, but it shall be at least 680 mm.

For the tests carried out in accordance with paragraph 1.1.b) the auxiliary seat may be of the same type as the seat being tested and shall be located parallel to and directly behind the seat being tested. The two seats shall be at the height in accordance with the requirements of paragraph 7.1.2., adjusted identically, a seat spacing is chosen by the Technical Service in accordance with the location of the seats in the vehicle being tested.

Appendix 3

Paragraphs 2.2.2. to 2.2.5., renumber as paragraphs 2.2.3. to 2.2.6.

Insert new *paragraph 2.2.2.* to read:

2.2.2. Measurements at the neck of the dummy

Bending moment at the junction of neck and head along the lateral axis is measured with measurement systems with a CFC of 600.

Appendix 4

Paragraphs 1.2–1.3, renumber as paragraphs 1.3. to 1.4.

Insert new *paragraph 1.2* to read:

1.2 Allowable Neck Injury Criterion (ANIC)

1.2.1 This criterion is defined by the bending moment of the neck along the lateral axis while stretching, expressed in Nm, measured in accordance with paragraph 2.2.2. of the Appendix 3.

II. Justification

A detailed justification for the proposal is provided below.

1. A injury criterion in relation to the neck bending moment along the lateral axis (shall not exceed 57 Nm when stretched) has been added to Appendix 1, as in research testing of seats with 2 safety anchorages, the neck bending moment exceeded the norm prescribed by UN Regulation No. 94.

2. The distance between the seats for the test must be equal to 750 mm, but in a vehicle that distance may be equal to 680 mm, which does not contradict with paragraph 7.7.8.4.1 of UN Regulation No. 107.

In connection to the above, vehicle testing should be carried out with the distance between the seats provided in the vehicle and at which the worst result is likely with respect to dummy injury criteria; for the seats testing, the manufacturer has the right to choose the distance at which the test seat shall be safe.

3. Paragraph 2.1.2 shall not be deleted, since the scope of UN Regulation No. 80 provides for testing of seats for vehicles of M2 and M3 categories of II, III and B classes; in these cases they can be approved without a vehicle and mounted rigidly on a test platform. For paragraphs 2.1.1 and 2.1.2 the references were made to the scope of the Regulation, clarifying the application of tests to the seats and vehicles,
