

## **Proposal for supplement [4] to UN Regulation No. 137.01 and supplement [1] to UN Regulation R137.02**

### **Submitted by the expert from the Netherlands \***

The text reproduced below was prepared by the expert from the Netherlands, aiming to clarify the requirements for the adjustment of the passenger seat back when installing the H-III 5<sup>th</sup> percentile female dummy. The modifications to the current text of the UN Regulation are marked in bold for new or strikethrough for deleted characters.

## **I. Proposal**

*Annex 3 Paragraph 1.4.3.11.3.*, amend to read:

“1.4.3.11.3. Position of the front seat-backs

If adjustable, the seat-backs shall be adjusted so that the resulting inclination of the torso of the dummy is as close as possible to that recommended by the manufacturer for normal use or, in the absence of any particular recommendation by the manufacturer, to 25° towards the rear from the vertical. For the fifth percentile female dummy, the seat back may be adjusted to a different angle, if this is needed to respect the requirements of Annex 5, paragraph 3.1.2.”

*Annex 5 Paragraph 3.13*, amend to read:

“3.1. Head

The transverse instrumentation platform of the head shall be horizontal within 2.5°. ~~To level the head of the test dummy in vehicles with upright seats with non adjustable backs, the following sequences shall be followed. First adjust the position of the "H 5<sup>th</sup>" point within the limits set forth in paragraph 3.4.3.1. below to level the transverse instrumentation platform of the head of the test dummy. If the transverse instrumentation platform of the head is still not level, then adjust the pelvic angle of the test dummy within the limits provided in paragraph 3.4.3.2. below. If the transverse instrumentation platform of the head is still not level, then adjust the neck bracket of the test dummy the minimum amount necessary to ensure that the transverse instrumentation platform of the head is horizontal within 2.5°.~~

*Introduce new paragraphs 3.1.1. and 3.1.2.* to read:

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\* In accordance with the programme of work of the Inland Transport Committee for 2006–2010 (ECE/TRANS/166/Add.1, programme activity 02.4), 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.

- "3.1.1 To level the head of the test dummy in vehicles with upright seats with non-adjustable backs, the following sequences shall be followed. First adjust the position of the "H 5<sup>th</sup>" point within the limits set forth in paragraph 3.4.3.1. below to level the transverse instrumentation platform of the head of the test dummy. If the transverse instrumentation platform of the head is still not level, then adjust the pelvic angle of the test dummy within the limits provided in paragraph 3.4.3.2. below. If the transverse instrumentation platform of the head is still not level, then adjust the neck bracket of the test dummy the minimum amount necessary to ensure that the transverse instrumentation platform of the head is horizontal within 2.5°.**
- 3.1.2 To level the head of the test dummy in vehicles with adjustable backs, the following sequences shall be followed. First adjust the position of the "H 5<sup>th</sup>" point within the limits set forth in paragraph 3.4.3.1. below to level the transverse instrumentation platform of the head of the test dummy. If the transverse instrumentation platform of the head is still not level, then adjust the pelvic angle of the test dummy within the limits provided in paragraph 3.4.3.2. below. If the transverse instrumentation platform of the head is still not level, then adjust the seat back to a different angle at a minimum amount necessary to ensure that the transverse instrumentation platform of the head is horizontal within 2.5°."**

## **II. Justification**

Annex 3, paragraph 1.4.3.11.3 indicates, that for the H-III fifth percentile female dummy, the seat back **may be** adjusted to a different angle, if this is needed to respect the requirement of Annex 5, paragraph 3.1.

In case the seat back is adjustable, the sequence is not clearly defined in Annex 5. This leads to different interpretations, where it is not clear if changing the seat back angle prevails over adjusting the neck bracket and what order needs to be followed in case of an adjustable seat back. This proposal makes it clear that first, the dummy position needs to be slightly adjusted within the said tolerances, before the seat back angle is adjusted. In case the seat back angle is adjustable, this prevails over adjusting the neck bracket of the dummy.

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