

I. Proposal to modify the proposed amendments to GTR No 9 in working document ECE/TRANS/WP.29/AC.3/31

Concerning the proposal to amend paragraphs 3.19. and 3.25., remove the square brackets.

Concerning the proposal to insert new paragraphs 3.30. and 3.31., replace these paragraphs with:

"3.30. "Measuring point"

3.30.1. "Measuring point" for the headform test means a point on the vehicle's outer surface selected to be tested. The central axis of the impactor and the measuring point are in a plane parallel to the vertical longitudinal median plane of the vehicle (see Figure 6A). The measuring point is located in a two-dimensional plane parallel to the vertical longitudinal median plane of the vehicle at the location where the cross sections of the headform and bonnet top test area touch. The first contact point may differ from the measuring point as a result of the three-dimensional geometry of the bonnet top (see Figure 6B)."

The measuring point is sometimes referred to as "test point" or "selected impact point" in respective regulatory texts for pedestrian protection.

3.30.2. "Measuring point" for the lower legform to bumper test and upper legform to bumper test means a point on the vehicle's outer surface selected to be tested. The central axis of the impactor and the measuring point are in a plane parallel to the vertical longitudinal median plane of the vehicle. The measuring point is located in a two-dimensional plane parallel to the vertical longitudinal median plane of the vehicle at the location where the cross sections of the legform and bumper test area touch. The first contact point may differ from the measuring point as a result of the three-dimensional geometry of the vehicle front (see Figure 6C)."

Update the references to 3.30. in Figure 6A and 6B into 3.30.1.

Update the reference to 3.31 in Figure 6C into 3.30.2.

Concerning the proposal to insert new paragraph 3.32., renumber paragraph 3.32. into 3.31.

Concerning the proposal to amend paragraph 5.2.4.3., replace this paragraph with:

"5.2.4.3. The areas of "HIC1000 zone" and "HIC1700 zone" may consist of several parts, with the number of these parts not being limited. The determination of the impacted zone is done by the ~~measuring first contact~~ measuring first contact point, independent of the first contact point of the headform inside or outside of with the "bonnet top test area"."

Concerning the proposal to amend paragraphs 7.1.1.3.3., replace this paragraph with:

"7.1.1.3.3. ~~At the time of first contact the centre line of the impactor shall be within a ± 10 mm tolerance to the selected impact location.~~ **For lower leg testing, a horizontal and vertical impact tolerance of ± 10 mm shall apply.**"

Concerning the proposal to amend paragraphs 7.3.3., replace this paragraph with:

"7.3.3. The **actual point or points** of first contact of the **child** headform impactor **during the test** shall be within ~~a ± 10 mm of~~ **(at least one of) the corresponding anticipated point(s) of first contact as determined by moving the child headform along the prescribed trajectory for the impact test, thus with the central axis of the impactor in the same vertical longitudinal plane in which the measuring point is located, until such contact occurs.** ~~tolerance to the selected impact point.~~"

Concerning the proposal to amend paragraphs 7.4.3., replace this paragraph with:

"7.4.3. The **actual point or points** of first contact of the **adult** headform impactor **during the test** shall be within ~~a ± 10 mm of~~ **(at least one of) the corresponding anticipated point(s) of first contact as determined by moving the adult headform along the prescribed trajectory for the impact test, thus with the central axis of the impactor in the same vertical longitudinal plane in which the measuring point is located, until such contact occurs.** ~~tolerance to the selected impact point.~~"

II. Justification

1. The European Commission has raised concerns about working document ECE/TRANS/WP.29/AC.3/31 during the 50th session of GRSP, which have been further discussed during the 51st session.
 2. The proposal in this informal document is aimed to amend working document ECE/TRANS/WP.29/AC.3/31 and to reflect the outcome of discussions with OICA, The Netherlands, Japan, South Korea, USA, and the EC.
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