

**Draft amendments to TRANS/WP.29/GRSP/2005/5
(Draft amendment to Regulation No.16)**

Transmitted by the expert from Japan

Note: The text reproduced below was prepared by Japan in order to delete the requirement of acceleration distance for acceleration sled device and propose new values for the sled acceleration initial slope requirements. The amendments to the text are marked in ***bold and italic characters***, and existing texts to be deleted are ~~double-crossed through~~.

Note: This document is distributed to the Experts on Passive Safety only.

A. PROPOSAL

Paragraph 7.7.4.2, amend to read:

7.7.4.2. Acceleration test device

The trolley shall be so propelled that, during the test, its total velocity change ΔV is [51 km/h $^{+2}$ ₋₀ km/h] and its acceleration curve is within the hatched area of the graph in annex 8, and stay above the segment defined by the coordinates [10g, ~~7.5ms~~] and [20g, ~~12.5ms~~]. The trolley shall remain horizontal during the acceleration. ~~The distance to achieve the first [50 km/h $^{+1}$ ₋₀ km/h] of the velocity change of the trolley shall be of [40 cm \pm 5 cm].~~ The start of the impact (T0) is defined, according to ISO DIS 17 373 for a level of acceleration of 0.5 g. Despite the fulfilment of the above requirements, the technical service shall use a mass of trolley (equipped with its seat), as specified in paragraph 1 of annex 6, superior to 380 kg."

Paragraph 7.7.5., amend to read:

"7.7.5. The trolley speed immediately before impact (only for deceleration sleds, needed for stopping distance calculation), the trolley acceleration or deceleration, the forward displacement of the manikin and the speed of the chest at a 300 mm displacement of the chest shall be measured.
The velocity change will be calculated by integration of the recorded sled acceleration or deceleration.
The distance to achieve the first [50 km/h $^{+1}$ ₋₀ km/h] of the velocity change of the trolley may be calculated by double integration of the recorded sled ~~acceleration or deceleration.~~"

B. JUSTIFICATION

In Japanese understanding, for deceleration sleds, the stopping distance is specified to ensure the consistency of test conditions. For acceleration sleds, however, the same level of consistency can be achieved by specifying the requirements on initial slope of acceleration.

We thus propose the deletion of the requirement for acceleration distance.

As for the values of the sled acceleration initial slope requirement [5ms-10G, 10ms-20G], they are too steep and therefore are not feasible. Japan hopes that they are replaced by feasible values [ex. 7.5ms-10G, 12.5ms-20G] on the basis of studying European lab's measurement results by deceleration sleds.