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Working Party on General Safety Provisions (GRSP)

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agenda item B.1.5.)

PROPOSAL FOR DRAFT AMENDMENTS TO REGULATION No. 44
(Child restraints)

Transmitted by the secretariat

Note: The text reproduced below was prepared by the secretariat, according to the request of GRSP expressed at its thirty-third session (TRANS/WP.29/GRSP/33, para. 29). It is based on the document TRANS/WP.29/GRSP/2002/10 transmitted by the expert from the Netherlands.

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

Paragraphs 8.4. to 8.4.2., amend to read:

"8.4. Registration of dynamic behaviour

8.4.1. In order to determine the behaviour of the manikin and its displacements, all dynamic tests shall be registered according to the following conditions:

8.4.1.1. Filming and recording conditions:

- the frequency shall be at least 1000 frames per second;
- the test shall be recorded on cine film, video or digital data carrier;

8.4.1.2. Set up conditions of cameras:

cameras offering side view and where applicable top view shall be used, taking account of the following:

- the camera's optical axis has to be perpendicular to the direction of travel of the sled with an accuracy of ± 2.5 degrees;
- an out of plane motion 6/ shall not lead to a photogrammetric underestimation of displacement measurements. Therefore the set up condition shall be such that out of plane motion is always directed to the side view cameras;

an offset of the manikin 7/ shall not lead to photogrammetric underestimation of displacement measurements.

8.4.1.3. Performance of the registration process:

- in order to evaluate the performance of the filming and recording media a distortion index shall be assessed according to ISO 8721, edition 1987; during the static assessment the distortion index shall not exceed the value of 1 per cent;
- in case of cameras that run with the sled, the camera support shall have sufficient rigidity. Therefore it shall be proven by means of a dynamic assessment according to a curve within the hatched area shown in annex 7 – appendix 1 and passing through a maximum of $26 G \pm 1 G$ that a change in accuracy does not lead to exceeding the limits that count for the static assessment above;

8.4.2. Analysing recordings:

- suitable calibration markings shall be mounted firmly on the trolley or in the vehicle structure so that the displacement of the manikin can be determined. The reference length used for scaling shall be determined with an accuracy of ± 2.5 mm, the reference length shall be at least 1000 mm.

6/ In case of three point belts the chosen shoulder attachment (left or right) will lead to a rotation of the upper torso and head towards the belted shoulder.

7/ Paragraph 8.1.3.6.3.3. allows positioning up to 80 mm out of the centre."
