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World Forum for Harmonization of Vehicle Regulations**Working Party on Passive Safety****Fifty-sixth session**

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Item 8 of the provisional agenda

Regulation No. 17 (Strength of seats)**Proposal for Supplement 3 to the 08 series of amendments to
Regulation No. 17 (Strength of seats)****Submitted by the expert from CLEPA***

The text reproduced below was prepared by the expert from the European Association of Automotive Suppliers (CLEPA) to improve the reproducibility of the luggage impact test described in Annex 9 of UN Regulation No. 17. It is based on a document without symbol (GRSP-55-15) distributed during the fifty-fifth session of the Working Party on Passive Safety (GRSP) (see ECE/TRANS/WP.29/GRSP/55, para. 18). The modifications to the text of the UN Regulation are marked in bold for new characters.

* In accordance with the programme of work of the Inland Transport Committee for 2012–2016 (ECE/TRANS/224, para. 94 and ECE/TRANS/2012/12, 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.

I. Proposal

Annex 9, paragraph 1., amend to read:

"1. Test blocks

Rigid blocks, with the centre of inertia in the geometric centre.

Type 1

Dimensions: 300 mm x 300 mm x 300 mm
all edges and corners rounded to 20 mm

Mass: 18 kg

Moment of inertia $0.3 \pm 0.05 \text{ kgm}^2$ (around all 3 principal axis of inertia of the luggage blocks)

Type 2

..."

II. Justification

1. UN Regulation No. 17 provides luggage impact test requirements, performed by using two rigid blocks of 18 kg each. These blocks are defined in geometry and weight by indicating that their inertia centre corresponds to their geometric centre. However, the UN Regulation did not define the moment of inertia of the luggage blocks, which resulted in a variability of the trajectory and behaviour of the luggage blocks before and after impact.

2. This is particularly relevant for the lower blocks because they are placed at a distance of 200 mm from the seat back and have, therefore, enough room to take a trajectory according to their moment of inertia.

3. The proposed values of admissible moments of inertia range from a perfect homogeneous material (moment of inertia = 0.267 kgm^2) up to 0.35 kgm^2 representing the broadest rigid blocks used by the industry for this test. This solution is more appropriate than using homogeneous distribution of different light-weight materials where the inner geometry of the blocks is adapted to meet the 18 kg mass requirement of the UN Regulation.
