

## **PROPOSAL FOR CHANGES IN ECE R12 – Protective Steering**

### **1.0 Correction to cl 3.2 of Annex 5 – head impact test**

1.1 The clause should be corrected by deleting the words as follows :  
*The head form shall be fitted with two accelerometers ~~& a speed measuring device, all capable of measuring values in the impact direction.~~*

1.2 **Justification** – In all the head impact tests, speed measuring device is not a part of headform. It is an external stationary system with optical / non optical beams being used popularly.

### **2.0 Inclusion of text to cl 3.3.3 to Annex 5 – head impact test**

2.1 Include the following text – *an external speed measurement system shall be placed to record the impactor speed before the impact. The accuracy of the recording instrument should be as follows :*

### **3.0 Correction to cl 4.3 of Annex 5 – head impact test**

3.1 The clause should be modified as “*the impactor shall strike at a velocity of 24.1 kmph, or at a speed of 19.1 kmph if it is fitted with airbag, ...*”

3.2 **Justification** – the modifications are suggested based on cl 1.4.2 of annex 4 to ECE R21 – interior fitments.

### **4.0 Inclusion of mechanical properties of the bodyblock**

4.1 The definition of the bodyblock is incomplete in absence of the following information –

- 4.1.1 Rate of loading during stiffness measurement,
- 4.1.2 Centre of gravity,
- 4.1.3 Moment of inertia

4.2 It is proposed to adopt the following as engineering guidelines based on SAE J944 (which is withdrawn by SAE) –

- 4.2.1 Rate of loading during stiffness measurement –  $250 \pm 5$  mm/min,
- 4.2.2 Centre of gravity –  $551.2 \pm 6$  mm from top of the bodyblock,
- 4.2.3 Moment of inertia about lateral axis through centre of gravity –  $23 \pm 2.3 \text{ kg.m}^2$ .