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4.2 It is proposed to adopt the following as engineering guidelines based on SAE J944 (which is withdrawn by SAE) –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 ± 5 mm/min,
4.2.2 Centre of gravity – 551.2 ± 6 mm from top of the bodyblock,
4.2.3 Moment of inertia about lateral axis through centre of gravity – 23±2.3kg.m².