

## Proposed amendments to Annex 3 of document ECE/TRANS/WP.29/GRRF/2011/24 (AEBS – collision mitigation regulation)

### Introducing comment:

There is a lack of experience with regard to the driver/vehicle behaviour characteristics of AEBS equipped N<sub>2</sub> category vehicles, and a significant difference in vehicle dynamics between the higher and lower ends of the weight range. Therefore, while CLEPA can support an AEBS requirement – the same as for N<sub>3</sub> category vehicles – at the higher end of the weight range, it can not support an AEBS requirement including an emergency braking phase for vehicles at the lower end of the weight range, i.e. those with a vacuum hydraulic braking system. Should it be required to include such vehicles in the regulation, it is recommended that the mandatory requirement should only be for a warning. Any automatic emergency braking would be optional.

### Proposed amendment:

#### Annex 3

#### Warning and activation test requirements – pass/fail values

A	B		C		D		E		F		G		H	
	Stationary target				Moving target									
	Timing of warning modes		At least 2 (ref. paragraph 6.4.2.2.)	Speed reduction (ref. paragraph 6.4.4.)	Timing of warning modes		Speed reduction (ref. paragraph 6.5.3.)	Target speed (ref. paragraph 6.5.1.)						
At least 1 haptic or acoustic (ref. paragraph 6.4.2.1.)		At least 1 haptic or acoustic (ref. paragraph 6.5.2.1.)			At least 2 (ref. paragraph 6.5.2.2.)									
M <sub>3</sub> and N <sub>3</sub> vehicles with a pneumatic braking system {pneumatic rear axle suspension}	Not later than 1.4 s. before start of emergency braking phase	Not later than 0.8 s. before start of emergency braking phase	Not less than 10/20 km/h <sup>2</sup>	Not later than 1.4 s. before start of emergency braking phase	Not later than 0.8 s. before start of emergency braking phase	No impact	32 ± 2 km/h							1
M <sub>3</sub> vehicles with a Vacuum-hydraulic braking system	No restriction regarding timing and warning modes <sup>1</sup>	No restriction regarding timing and warning modes <sup>1</sup>	0 km/h <sup>2</sup>	No time restriction	Not later than 1.4 s. before start of emergency braking phase <sup>3</sup>	0 km/h <sup>4</sup>	32 ± 2 km/h							2
M <sub>2</sub> and N <sub>2</sub> vehicles with a pneumatic braking system {pneumatic rear axle suspension}	Not later than 1.4 s. before start of emergency braking phase	Not later than 0.8 s. before start of emergency braking phase	Not less than 20 km/h	Not later than 1.4 s. before start of emergency braking phase	Not later than 0.8 s. before start of emergency braking phase	No impact	32 ± 2 km/h							3
M <sub>2</sub> and N <sub>2</sub> , M <sub>3</sub> and N <sub>3</sub> vehicles with an pneumatic-hydraulic braking system (AoH) {pneumatic rear axle suspension}	Not later than 1.4 s. before start of emergency braking phase	Not later than 0.8 s. before start of emergency braking phase	Not less than 20 km/h	Not later than 1.4 s. before start of emergency braking phase	Not later than 0.8 s. before start of emergency braking phase	No impact	32 ± 2 km/h							4
M <sub>2</sub> and N <sub>2</sub> vehicles with a Vacuum-hydraulic braking system	No restriction regarding timing and warning modes <sup>1</sup>	No restriction regarding timing and warning modes <sup>1</sup>	0 km/h <sup>2</sup>	No time restriction	Not later than 1.4 s. before start of emergency braking phase <sup>3</sup>	0 km/h <sup>4</sup>	32 ± 2 km/h							5

Notes: <sup>1</sup> For zero speed reduction, start of emergency braking phase is time to collision. In this case, paragraph 6.4.3. does not apply.

<sup>2</sup> Speed reduction optional.

<sup>3</sup> For zero speed reduction, start of emergency braking phase is time to collision.

<sup>4</sup> In this case, paragraph 6.5.3. does not apply. Speed reduction optional.