### Amendment to ECE/TRANS/WP29/GRRF/2011/23, 24, 25 and 26

### A. Proposal

- 5.1.1 of GRRF/2011/23, 24, 25 and 26, amend to read
- 5.1.1. Any vehicle fitted with an AEBS-M complying with the definition of paragraph 2.1.1. shall meet the performance requirements contained in paragraphs 5.1. to 5.6.2. of this Regulation and shall be equipped with an anti-lock braking function in accordance with the performance requirements of Annex 13 of Regulation No.13 [and a Vehicle Stability Function in accordance with the performance requirements of Annex 21 of Regulation No.13].

# Annex 3 of ECE/TRANS/WP29/GRRF/2011/24 and 25, amend to read Warning and activation test requirements – pass/fail values

	A	В	C	D	E	F	G	Н	
		Stat	ionary target		Moving target				
		Timing of warning modes		Speed	Timing of warning modes		Speed	Target	
Class		At least 1 haptic	At least 2	reduction	At least 1	At least 2	reduction	speed (ref.	
		or acoustic	(ref.	(ref.	haptic or	(ref.	(ref.	paragraph	
		(ref. paragraph	paragraph	paragraph	acoustic	paragraph	paragraph	6.5.1.)	
		6.4.2.1.)	6.4.2.2.)	6.4.4.)	(ref.	6.5.2.2.)	6.5.3.)		
					paragraph				
					6.5.2.1.)				
1	$M_3$ and $N_3$	Not later than 1.4	Not later	Not less than	Not later	Not later than	No impact	$32 \pm 2 \text{km/h}$	
	<u>1</u> /	s. before start of	than 0.8 s.	10 km/h	than 1.4 s.	0.8 s. before			
		emergency	before start		before start	start of			
		braking phase	of		of	emergency			
			emergency		emergency	braking phase			
			braking		braking				
			phase		phase				
2	M <sub>2</sub> and N <sub>2</sub>								

 $\underline{1}$ / Class 2 requirement is applied to vehicles with pneumatic-hydraulic braking system (AoH) and vehicles with hydraulic braking system

## Annex 3 of ECE/TRANS/WP29/GRRF/2011/23 and 26, amend to read

	A	В		C	D	E	F	G		Н	
		Sta	tionary	y target	Moving target						
		Timing of warning modes			Speed	Timing of warning modes		Speed	Tar	Target	
		At least 1 haptic	At leas	st 2	reduction	At least 1	At least 2	reduction	spee	speed (ref.	
Class		or acoustic (ref.			(ref.	haptic or	(ref.	(ref.	para	paragraph	
		(ref. paragraph	paragı	raph	paragraph	acoustic	paragraph	paragraph	6.5.1	l.)	
		6.4.2.1.)	6.4.2.2	.)	6.4.4.)	(ref.	6.5.2.2.)	6.5.3.)			
						paragraph					
						6.5.2.1.)					
1	M <sub>3</sub> and N <sub>3</sub>	Not later than	Not lat	ter than	Not less	Not later	Not later	No impact	12 ±	2 km/h	
	<u>1</u> /	1.4 s. before	0.8 s. b	efore	than 20	than 1.4 s.	than 0.8 s.		[3/]		
		start of	start o	f	km/h [2/]	before start	before start				
		emergency	emerg	ency		of emergency	of				
		braking phase	brakin	g phase		braking	emergency				
						phase	braking				
							phase				
2	M <sub>2</sub> and N <sub>2</sub>										

- 1/ Class 2 requirement is applied to vehicles with hydraulic braking system.
- [2/ Not less than 10km/h is applied for speed reduction to vehicles with pneumatic-hydraulic braking system (AoH) .]
- [3/  $32 \pm 2$ km/h is applied for target speed to vehicles with pneumatic-hydraulic braking system (AoH).]

#### **B.** Justification

With regards to the necessity of equipment of EVSC and (Rear) Air Suspension for AEBS, there is a different opinion among different countries and regions on reflecting their market. It would be appropriate to decide this judgment on national or regional basis. Therefore the relevant prescriptions are deleted.

With regards to the different requirement considering the capability of brake system, the basic classification by vehicle category is introduced instead of brake system in column A. And some foot notes are added to adjust the discrepancy between vehicle category and brake system.