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Item 4.15.4 of the provisional agenda

1958 Agreement – Consideration of draft Regulations**Proposal for amendments to the draft Regulation on
Advanced Emergency Braking Systems (AEBS) *****Submitted by the Working Party on Brakes and Running Gear ****

The text reproduced below was adopted by the Working Party on Brakes and Running Gear (GRRF) at its seventy-first session in order to amend ECE/TRANS/WP.29/2011/92. It is based on GRRF-71-27-Rev.1 and is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Administrative Committee (AC.1) for consideration. Although GRRF solved the majority of open issues marked in square brackets in ECE/TRANS/WP.29/2011/92, WP.29 and AC.1 still have to decide whether they wish to use the alternative drafting for paragraph 5.1.1. proposed in square brackets in this document.

* This document has been submitted late in order to include information on the latest progress in this work.

** In accordance with the programme of work of the Inland Transport Committee for 2010–2014 (ECE/TRANS/208, para. 106 and ECE/TRANS/2010/8, 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.

Introduction, amend to read:

"0. Introduction (for information)

The intention ... conditions.

While, in general, those vehicle categories will benefit from the fitment of an advanced emergency braking system, there are sub-groups where the benefit is rather uncertain because they are primarily used in other conditions than highway conditions (e.g. buses with standing passengers i.e. classes I, II and A). Regardless from the benefit, there are other sub-groups where the installation of AEBS would be technically difficult (e.g. position of the sensor on vehicles of category G and special purpose vehicles, etc.).

In addition, systems intended for vehicles not equipped with a pneumatic rear-axle suspension require the integration of advanced sensor technology to take into account the variation of the pitch angle of the vehicle. Contracting Parties wishing to apply this regulation to these vehicles should provide adequate time for this.

The system shall ..."

Paragraph 1. , amend to read:

"1. Scope and purpose

This Regulation applies to the approval of vehicles of category¹:

- (a) N₂ above 8 tons,
- (b) M₃ and
- (c) N₃

equipped with a pneumatic or air over hydraulic braking system with regard to an on-board system to avoid or mitigate the severity of a rear-end in lane collision"

¹ As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3.), document ECE/TRANS/WP.29/78/Rev.2, para. 2

Paragraphs 2.4. to 2.13., renumber as paragraphs 2.3. to 2.12.

Paragraph 3.2.1. , correct to read

"3.2.1. A description of the vehicle type with regard to the items mentioned in paragraph 2.2, together with a ... shall be specified."

Paragraph 5.1.1. , correct to read

"5.1.1. Any vehicle fitted with an AEBS complying with the definition of paragraph 2.1. 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"

[OR]

[Paragraph 5.1.1. , amend to read:

"5.1.1. Any vehicle equipped with a pneumatic rear-axle suspension and with an AEBS complying with the definition of paragraph 2.1. 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.

Vehicles equipped with another type of rear suspension may also be type approved provided that the requirements contained in paragraphs 5.1. to 5.6.2. are fulfilled."]

Paragraph 5.2.2., amend to read:

"5.2.2. Subsequent to the warning(s) of paragraph 5.2.1.1., and subject to the provisions of paragraphs 5.3.1. to 5.3.3., there shall be an emergency braking phase having the purpose of significantly decreasing the speed of the subject vehicle. This shall be tested in accordance with paragraphs 6.4. and 6.5."

Paragraph 6.4.1., correct to read:

"6.4.1. The subject vehicle ...
... at least 120 m from the target.

From the start of the functional part until the point of collision there shall be no adjustment to any control of the subject vehicle by the driver other than slight adjustments to the steering control to counteract any drifting."

Paragraph 7.1., amend to read:

7.1. Every modification of the vehicle type as defined in paragraph 2.2. above shall ... then either:

Annex 3, amend the table to read:

"

A	Stationary target			Moving target				
	Timing of warning modes		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 2 (ref. paragraph 6.4.2.2.)		At least 1 haptic or acoustic (ref. paragraph 6.5.2.1.)	At least 2 (ref. paragraph 6.5.2.2.)			
M ₃ , N ₂ >8t and N ₃	Not later than 1.4 s. before the start of emergency braking phase	Not later than 0.8 s. before the start of emergency braking phase	Not less than 10 km/h	Not later than 1.4 s. before the start of emergency braking phase	Not later than 0.8 s. before the start of emergency braking phase	No impact	32 ± 2 km/h	1

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