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World Forum for Harmonization of Vehicle Regulations**Working Party on Automated/Autonomous and Connected Vehicles****Fourteenth session**

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Item 7 of the provisional agenda

Advanced Emergency Braking System**Proposal for a supplement to the 01 series of amendments to
UN Regulation No. 131 (Advanced Emergency Braking
System)****Submitted by the Chair of the Informal Working Group on Advanced
Emergency Braking Systems of Heavy Duty Vehicles (AEBS-HDV)***

The text reproduced below was prepared by the experts from the Informal Working Group on Advanced Emergency Braking Systems of Heavy Duty Vehicles to increase the potential speed reduction during the warning phase. The modifications to the existing text of the Regulation are marked in bold for new or in strikethrough for deleted characters.

* In accordance with the programme of work of the Inland Transport Committee for 2022 as outlined in proposed programme budget for 2022 (A/76/6 (Sect.20), para 20.76), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.



I. Proposal

Paragraph 6.4.2.3., shall be deleted to read:

- “6.4. Warning and activation test with a stationary target
- 6.4.2. The timing for the collision warning modes referred to in paragraph 5.5.1. above shall comply with the following:
- 6.4.2.1. At least one warning mode shall be provided no later than specified in Table I, Column B, of Annex 3. [...]
- 6.4.2.2. At least two warning modes shall be provided no later than specified in Table I, Column C, of Annex 3.
- ~~6.4.2.3. Any speed reduction during the warning phase, shall not exceed either 15 km/h or 30 per cent of the total subject vehicle speed reduction, whichever is higher.~~
- 6.4.3. The collision warning phase shall be followed by the emergency braking phase.
- 6.4.4. The total speed reduction of the subject vehicle at the time of the impact with the stationary target shall be not less than the value specified in Table I, column D of Annex 3.
- 6.4.5. The emergency braking phase shall not start before a TTC equal to ~~or less than~~ 3.0 seconds.”

Paragraph 6.5.2.3., shall be deleted to read:

- “6.5. Warning and activation test with a moving target
- 6.5.2. The timing for the collision warning modes referred to in paragraph 5.5.1. above shall comply with the following:
- 6.5.2.1. At least one haptic or acoustic warning mode shall be provided no later than specified in Table I Column E of Annex 3.
- 6.5.2.2. At least two warning modes shall be provided no later than specified in Table I Column F of Annex 3.
- ~~6.5.2.3. Any speed reduction during the warning phase shall not exceed either 15 km/h or 30 per cent of the total subject vehicle speed reduction, whichever is higher.~~
- 6.5.3. The emergency braking phase shall result in the subject vehicle not impacting the moving target.
- 6.5.4. The emergency braking phase shall not start before a TTC equal to ~~or less than~~ 3.0 seconds.”

II. Justification

1. The effect of deleting paragraphs 6.4.2.3. and 6.5.2.3. is that the speed reduction during the warning phase can be increased, with a positive effect on the performance.
 2. Deleting these paragraphs is also the simplest way to achieve this positive consequence, while at the same time avoiding side effects which may impact the concept of the Regulation (e.g. the warning and braking strategies).
 3. The modifications to paragraphs 6.4.5. and 6.5.4. are editorial.
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