

## **Proposal for amendments to the 01 series of amendments of UN Regulation No. 131 (Advanced Emergency Braking Systems of heavy vehicles)**

### **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 text of the current regulation are marked in strikethrough characters for deleted text and in bold characters for added text.

## **I. Proposal**

*Paragraph 6.4.*, amend 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.*, amend 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. JUSTIFICATIONS**

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 in 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.