

Necessity of Collision Warning before Emergency Braking Phase

- OICA proposal(AEBS-LDWS-18-03) is not a normal driving for driver.
- OICA proposal is the limit of vehicle performance.
- Japan understand that OICA proposal is driver's steering maneuver in case of emergency situation.
- Therefore, **a sufficient warning time needs to be added to 1 second of OICA proposal to inform the emergency situation.**
- This sufficient warning time is 1.4 seconds in ITS informal and 0.8 seconds in Japanese guideline.
- Therefore, TTC of 1.8 or 2.4 seconds will be appropriate for warning timing.
- This is nearly equal the previous OICA proposal (Page 26 in AEBS-LDWS-17-02rev.1).

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The warning of AEBS shall encourage the active avoiding control before the emergency brake activation.



A driver's active avoiding control is regulated by Para. 5.5.1.

5.5.1. The collision warning referred to in paragraph 5.2.1.1. shall be provided by at least two modes selected from acoustic, haptic or optical. The timing of the warning signals shall be such that they provide the possibility for the **driver to react** to the risk of collision and take control of the situation, and shall also avoid nuisance for the driver by too early or too frequent warnings. This shall be tested in accordance with the provisions of paragraphs 6.4.2. and 6.5.2.

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Guidelines of high-priority warning signals (ITS informal group in WP29) requires to give 1.4 seconds before Emergency Braking Phase to driver.

Guidelines of high-priority warning signals :

ECE-TRANS-WP.29-1091-Add.1e



The effect of the collision warning is more important than the nuisance warning.

Appendix of AEBS/LDWS-19-XX shows the detail of High-priority warnings in guidelines.