

**UNECE GRRF informal group on AEBS/LDW
1st meeting, Paris, 25 & 26 June 2009**

Agenda item 6.3

Proposals for definition of AEBS

GRRF-S08-04 (CLEPA):

"Advanced Emergency Braking System" means a system which will automatically detect the possibility of a collision with an obstacle, when travelling in a forward direction, provide the driver with a warning(s) and in the event of no corrective action by the driver shall automatically decelerate the vehicle and may take other corrective action(s) to avoid or mitigate the severity of the collision.

AEBS/LDW-01-05 (Japan):

"Automatic Emergency Braking Systems (hereafter AEBS)" means a braking system which has functions of the collision warning and the emergency event preparation to the driver in case of occurrence of a danger of collision with a forward obstacle and a function of the braking control for mitigating the damage of vehicle collision with a forward obstacle in case of a collision judged imminent or unavoidable.

AEBS/LDW-01-04 (EC):

"Advanced Emergency Braking System" means a system which can automatically detect an emergency situation and activate the vehicle braking system to decelerate the vehicle with the purpose of avoiding or mitigating a collision.

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Proposals/positions on scope for AEBS Regulation

GRRF-S08-04 (CLEPA):

Subject to the provisions of paragraph [12.5.] to this Regulation, **vehicles of categories M2, M3, N2 and N3 being equipped with a Vehicle Stability Function** according to paragraph 2.32., shall be equipped with an advanced emergency braking system.

AEBS/LDW-01-05 (Japan):

This regulation applies to type approval of the vehicles of categories **[M2,M3,N2,N3]** * with regard to the Automatic Emergency Braking Systems defined in paragraph 2.3.

At the time of application of this Regulation, Contracting Parties shall declare that they intend to mandate the installation of AEBS specified in this regulation in their territory for which category of vehicles.

*This vehicle of categories shows the proposal of EC. This issue will be discussed in future in the informal meeting and GRRF.

GRRF-S08-10 (OICA):

Category **M3** vehicles **of class II and III, > 12 t, 4x2 and 6x2**
(exempt M3G = off-road M3 vehicles)

Category **N3** vehicles, **> 16 t, 4x2 and 6x2**
(exempt N3G = off-road N3 vehicles)

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Agenda item 6.4 (a)

**Proposals/positions on accident scenarios
to be covered by an AEBS Regulation**

GRRF-S08-03 (CLEPA):

(rear-end) collisions with moving and **stopping** vehicles
(stationary vehicles, motorcycles and pedestrians optional)

AEBS/LDW-01-05 (Japan):

rear-end collision with forward vehicle which is travelling
(forward stationary vehicles as an option)

(for the future: also frontal collision in a curved road)

GRRF-S08-10 (OICA):

(rear-end) collision with moving/stopping targets only

GRRF-S08-09 (ISO):

rear-end collisions

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Agenda item 6.4 (b)

**Proposals/positions on detection capabilities
for AEBS**

GRRF-S08-03 (CLEPA):

reaction to moving and stopped vehicles mandatory
(stationary vehicles, motorcycles and pedestrians optional)

AEBS/LDW-01-06 (Japan):

- A) The detection of moving vehicle shall be mandated
- B) The detection of stationary vehicle shall be optional,
but Contracting Party can mandate detection of a
stationary vehicle in its territory.

GRRF-S08-09 (ISO):

Vehicles ahead

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Agenda item 6.4 (d)

Proposals/positions on speed ranges for AEBS

GRRF-S08-04 (CLEPA):

- The advanced emergency braking system shall operate within the speed range of 20 km/h to 130 km/h.
- The system may operate outside of this speed range.

AEBS/LDW-01-06 (Japan):

The system need not to start the braking control in the following speed ranges:

- (a) The vehicle speed is exceeding a maximum speed.
- (b) The absolute speed of the vehicle is equal to or less than 15 km/h.
- (c) The relative speed of the vehicle is equal to or less than 15 km/h.
- (d) In case of vehicle malfunctions

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Agenda item 6.4 (f)

**Proposals/positions on HMI issues for AEBS
(driver controls and warnings)**

GRRF-S08-03 + GRRF-S08-04 (CLEPA):

- Failure warning: failure warning & non-failure loss of functionality indicators mandatory
- Switch-off: driver not be able to switch off manually
- Override: driver shall always be able to override

AEBS/LDW-01-05 + AEBS/LDW-01-06 (Japan):

- Failure warning: visual alarm if any failure or loss of functionality occurs with the system
- Switch-off: possible subject to a number of conditions (optical warning, system reactivated with each new ignition cycle, off-switch not be easily accessible, warning in user's manual)
- Override: possibility for driver to override system

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Agenda item 6.5

Proposals for AEBS test procedures

GRRF-S08-04 (CLEPA):

AEBS not to react in:

- Adjacent vehicle curve test
- Overtaking manoeuvre test
- Road exit test

AEBS to react in:

- Closing gap test
- Braking vehicle test
- Slowing to a stop test

AEBS/LDW-01-05 (Japan):

- Functioning test for collision with stationary obstacle
- Verification test of de-activation of AEBS for obstacle outside test lane
- Functioning test for collision with moving obstacle
- Functioning test for the malfunction warning device