

# UN ECE GRRF AEBS and LDWS Informal Working Group

## CLEPA proposed amendments to AEBS “skeleton” document AEBS-LDWS-TF02-03 (rev2) as requested at Task Force Meeting 02 (5<sup>th</sup> November 2009) in London

**DRAFT 19-11-2009**

Proposed amendments shown in blue

### 2. DEFINITIONS for the purposes of this regulation:

#### 2.1 General

2.1.1 "Advanced Emergency Braking System (AEBS)" means a system which can detect a potential forward collision, warn the driver and, in the event of no corrective action by the driver, automatically activate the vehicle braking system to decelerate the vehicle with the purpose of avoiding, or mitigating the severity of, a collision.

2.1.2. "Warning phase" means the time during which the driver is provided with a signal(s) to warn of a potential forward collision.

2.1.3. "Braking phase" means the time following the warning phase during which the brakes are autonomously applied.

2.1.4. "Collision mitigation" ~~means the actions taken by the system, such as the detection of a stationary obstacle, the computing of the relevant data and the activation of the service brakes, for significantly decreasing the impact speed.~~

or, if a collision mitigation definition is necessary:

"Collision mitigation" means the actions taken by the system, ~~such as the detection of a stationary obstacle~~ comprising the detection of a forward obstacle, the computing of the relevant data and the activation of the service brakes, for significantly decreasing the impact speed.

2.1.3 ~~"Collision avoidance" means the actions taken by the system, such as the obstacle detection, the computing of the relevant data and the activation of the service brakes, for slowing down the subject vehicle to a speed equal to or lower than the target vehicle speed.~~

or, if a collision avoidance definition is necessary:

“Collision avoidance” means the actions taken by the system, ~~such as the obstacle detection comprising the detection of the forward obstacle~~, the computing of the relevant data and the activation of the service brakes, for ~~slowing down~~ decelerating the subject vehicle to a speed equal to or lower than the target vehicle speed.

2.1.4. “Time to collision” means the delay remaining between the instant being considered and the time of the collision between the subject vehicle and the target vehicle, notwithstanding any alteration of speeds and direction during that delay.

2.1.5. “Remaining reaction time” means the particular time to collision when the instant considered is defined by the vehicle manufacturer as permitting the driver to undertake an action successfully avoiding the collision.

2.1.6. “Stationary target” means a target ~~fixed on the ground on the axis of the test course~~ vehicle which is non-moving and in the lane of the subject vehicle.

2.1.7. “Moving target” means a target vehicle travelling at a speed of at least ~~[10/15]~~ km/h in the same direction and ~~[along the centre of the test lane/in the same lane]~~ as the subject vehicle ~~[and which may subsequently slow to a halt]~~.

## 2.2. For type-approval purposes

2.2.1. “Approval of a vehicle type” means the ~~full~~ procedure whereby a Contracting Party to the Agreement certifies that a vehicle type meets the technical requirements of this Regulation;

2.2.2. “Vehicle type with regard to its Advanced Emergency Braking System” means a category of vehicles which do not differ in such essential respects as:

- (a) the manufacturer's trade name or mark,
- (b) vehicle features which significantly influence the performances of the Advanced Emergency Braking System,
- (c) the type and design of the Advanced Emergency Braking System.

## 2.3. For AEBS testing purposes

2.3.1. “Subject vehicle” means the vehicle being ~~subject to testing~~ tested.

2.3.2. “Target vehicle” or “target” means a ~~target simulating the bulk and the radar cross section of a regular~~ high volume series production passenger car of category M1 AA saloon 1/ or an object representative of such a vehicle in terms of its identification characteristics applicable to the sensor system of the AEBS under test.

2.3.3. “Soft target” means a target that will suffer minimum damage or cause damage to the subject vehicle in the event of a collision

2.3.4. “Radar cross section (RCS)” ~~means is~~ a measure of how detectable ~~an object a~~ target is ~~with a~~ by radar and is applicable to both target vehicles and soft targets.

Drafting notes:

As “warning phase” and “braking phase” definitions have been added it seems appropriate to amend the "advanced emergency braking system (AEBS)" definition.

The necessity of “collision mitigation” and “collision avoidance” definitions is dependant upon the use of such terms in the final text.

The text in paragraphs 2.3.1. and 2.3.2. was agreed at the Task Force Meeting 02.

The definitions have been structured in 3 separate parts as suggested at the Task Force Meeting 02.