

**DRAFT AMENDMENT TO REGULATION No. 13**  
Transmitted by the expert from the International Organization of Motor  
Vehicle Manufacturers (OICA)

**A. PROPOSAL**

Insert new paragraphs 2.32. and 2.33., to read:

"2.32. Braking signal: logic signal indicating brake activation as specified in paragraph 5.2.1.30.

2.33. Emergency braking signal: logic signal indicating emergency braking as specified in paragraph 5.2.1.31."

Amend draft paragraph 5.2.1.30., to read (document TRANS/WP.29/2004/38):

"5.2.1.30. Generation of a **braking** signal to illuminate stop lamps."

Remainder of the paragraph unchanged.

Insert new paragraphs 5.2.1.31. to 5.2.1.31.3., to read:

"5.2.1.31. When a vehicle is equipped with the means to indicate emergency braking, the emergency braking signal shall be activated and de-activated according to the specifications below:

5.2.1.31.1. The signal shall be activated by the application of the service braking system producing a deceleration above [7 +/- 1] m/s<sup>2</sup> for M1 and N1 categories, and [5 +/- 1] m/s<sup>2</sup> for M2, M3, N2 and N3 categories.

The signal shall be de-activated when the deceleration is below [4 +/- 1] m/s<sup>2</sup> for M1 and N1 and [3 +/- 0,5] m/s<sup>2</sup> for M2, M3, N2 and N3 categories.

5.2.1.31.2. The signal may be activated by the application of the service braking system in such a manner that it would produce, in an unladen condition and engine disconnected, under the test conditions of Type 0 as described in Annex 4, a deceleration above [7 +/- 1] m/s<sup>2</sup> for M1 and N1 categories, and [5 +/- 1] m/s<sup>2</sup> for M2, M3, N2 and N3 categories.

The signal shall be de-activated when the requested deceleration is below [4 +/- 1] m/s<sup>2</sup> for M1 and N1 and [3 +/- 0,5] m/s<sup>2</sup> for M2, M3, N2 and N3 categories.

5.2.1.31.3. The signal may be activated when

- the service braking system is applied and
- the antilock system is full cycling (as defined in paragraph 2. of Annex 13).

The signal shall be de-activated when the antilock system is no longer full cycling."

## **B. JUSTIFICATION**

GRRF-55 adopted the proposal of informal document No. GRRF-55-2 as reproduced in annex 2 of the official report (document TRANS/WP.29/GRRF/55). This base amendment can be described as a first step to introduce a requirement for advanced warning systems.

The purpose of the present amendment is to define a signal to be used in order to trigger the activation of the visual "Emergency stop signal" described in Regulation No. 48 (see TRANS/WP.29/GRE/2005/2) in the case of emergency braking situations. It will ensure that all vehicles equipped to signal an emergency braking operate in a consistent manner.

The present proposal reflects the outcomes of the GRE/GRRF informal group meeting of May 2005 concerning the modifications of Regulation No. 13.

The above criteria have been selected in a way to avoid too frequent activations and to get consistency within the traffic by adapting the deceleration limits to the performance of the different vehicle categories.

The speed and time criteria will be defined in Regulation No. 48 (lighting devices installation) because they are related to optical signalization as commented by WP.29.

When a vehicle is equipped with the means to indicate emergency braking, only the activation criterion of paragraph 5.2.1.31.1. (real deceleration) is mandatory. Activation criteria of the paragraphs 5.2.1.31.2. and 5.2.1.31.3. are optional. This permits the non-EBS vehicles (low cost) to also indicate emergency braking.

[Trailers are out of this proposal because they must be treated separately.]

### **Paragraph 5.2.1.30.**

Once the above proposal is adopted, with the addition of a new definition of "braking signal" in paragraph 2.32., paragraph 5.2.1.30. as inserted by the draft Supplement 11 to Regulation No. 13.09 (document TRANS/WP.29/2004/38) should be re-phrased for keeping the text consistent.

### **Paragraph 5.2.1.31.1.**

The criterion of actual deceleration may be easily verified during type 0 test.

The proposal to define different deceleration levels for M1/N1 and other categories is due to the fact:

- that the limit of braking system performance will produce different decelerations depending on the mass and category of vehicle;
- that a lower limit on passenger cars would provoke too frequent activation.

De-activation criteria are chosen in a manner that they offer a sufficient deceleration threshold from activation criteria.

The given tolerances for deceleration values permit a sufficient detection time.

### **Paragraph 5.2.1.31.2.**

Type 0-Test is easy to verify by technical services. To simplify testing of the activation monitoring, a test unladen situation is sufficient.

### **Paragraph 5.2.1.31.3.**

The condition is that service braking is applied **and** the antilock system is fully cycling. "Fully cycling" would eliminate sporadic activation by e.g. crossing railways.