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PROPOSAL FOR DRAFT AMENDMENTS TO REGULATION No. 16
(Safety-belts)

Transmitted by the expert from France

Note: The text reproduced below was prepared by the expert from France in order to introduce into Regulation No 16 the requirements concerning the fitting of safety-belt reminders. It is based on informal document GRSP-35-18. The proposed amendments to the current text of the Regulation are marked in bold characters.

Note: This document is distributed to the Experts on Passive Safety only.

A PROPOSAL

Paragraph 1., amend to read :

"1. This Regulation applies

It also applies to safety-belt reminder fitted in M1 category of vehicles."

Insert new paragraphs 2.39. to 2.44., to read :

- "2.39. **"Safety-belt Reminder"**, means a system dedicated to alert the driver when he does not use the safety-belt. The system is constituted by a detection of an unfastened safety-belt and by two levels of driver's alert: a first warning with visual signal and a second warning with visual and audible signals.
- 2.40. **"Visual warning"** means a warning by visual signal.
- 2.41. **"Audible warning"** means a warning by sound signal.
- 2.42. **"First level warning"** means a warning activated when the ignition switch is engaged (engine running or not) and the driver's safety-belt is not fastened.
- 2.43. **"Second level warning"** means a warning activated when a driver operates a vehicle without fastening the seatbelt.
- 2.44. **"Safety-belt is not fastened"** means, at the option of the manufacturer, either the driver seatbelt buckle is not engaged or the webbing length pulled out of retractor is 100 mm or less."

Insert new paragraphs 6.5 to 6.5.5., to read :

- "6.5. **Safety-belt Reminder.**
- 6.5.1. **General requirements.**
- 6.5.1.1. **Visual warning shall be so located as to be readily visible and recognisable in the daylight by the driver and distinguishable from other alerts.**
- 6.5.1.2. **Visual warning shall be by continuous or intermittent signal.**
- 6.5.1.3. **Audible warning shall be by continuous or intermittent sound signal or by vocal information. This signal may be constituted by more than one step.**
- 6.5.1.4. **Audible warning shall have a loud and clear signal so as to be easily recognized by the driver.**

- 6.5.2. **First level warning shall be at least a visual warning activated for 4 seconds or longer when the driver safety-belt is not fastened and the ignition switch is engaged.**
- 6.5.3. **The activation of the first level warning shall be tested according to the test procedure defined in paragraph 7.10.1.**
- 6.5.4. **Second level warning shall be a visual and audible signal activated for 30 seconds or longer when the safety-belt is not fastened, when the vehicle is in forward motion and when at least one of the following conditions or any combination of these conditions depending on the manufacturer's choice, is fulfilled:**
 - 6.5.4.1. **distance driven greater to distance threshold; threshold \leq 500 m.**
 - 6.5.4.2. **speed greater to speed threshold; threshold \leq 25 km/h.**
 - 6.5.4.3. **duration time (engine running) greater than duration time threshold; threshold \leq 60 seconds.**
- 6.5.5. **The activation of the second level warning shall be tested according to the test procedure defined in paragraph 7.10.2."**

Insert new paragraphs 7.10 to 7.10.2.3, to read:

- "7.10. Safety-belt reminder tests**
- 7.10.1. **The first level warning shall be tested with the vehicle stopped, the safety-belt fastened and the ignition switch engaged (engine running or not).**
- 7.10.2. **The second level warning shall be tested with the safety-belt not fastened and with one or any combination of the following conditions, according the manufacturer's choice:**
 - 7.10.2.1. **the test vehicle speeded up from a halt position to 25 $-0/+10$ km/h.**
 - 7.10.2.2. **the test vehicle has been driven for a distance of least 500 m.**
 - 7.10.2.3. **the test vehicle has had its engine running for at least 60 seconds."**

Paragraphs 7.10. and 7.11. (former), renumber as paragraphs 7.11. and 7.11.1.

Paragraph 8.1., amend to read:

- "8.1. Safety-belt and restraints systems equipment"**

Insert new paragraphs 8.4. to 8.4.1., to read :

"8.4. Safety-belt reminder equipment.

8.4.1. The driver seating position of the M1 category of vehicles ^{*}/, shall be equipped with a safety-belt reminder satisfying the requirements of the present Regulation.

^{*}/ As defined in the Consolidated Resolution of Construction of Vehicles (R.E.3), Annex 7 (document TRANS/WP.29/78/Rev.1/Amend.2)"

* * *

B JUSTIFICATION

Principles

The safety-belt use is mandatory in most countries around the world. In order to favour the safety-belt use by the passengers, it seems relevant to define harmonized regulatory requirements in regards of a mandatory system dedicated to alert the passengers when they do not use the safety-belt.

It has been demonstrated in many studies conducted by different countries and by the EEVC that a high rate of safety-belt uses provides a positive impact on road safety.

The purpose of this system would be to define two levels of alert when the safety-belt is not used:

- a first level characterized by a visual signal,
- a second level characterized by a visual and audible signals.

The system shall be designed in such a way that it provides assistance to the passengers. The target is to get more people that accept the benefits of the safety-belt, to actually use them.

The system must not create any passengers reject which could lead to bypass or damage the system.

Scope

The final objective is that these requirements should concern all the different categories of vehicle which have to comply with the mandatory safety-belt fitment and all the passengers of these corresponding vehicles.

Nevertheless, the enforcement of these new requirements need to be progressive taking into consideration the eventual technical and cost barriers regarding the feasibility of fitment of such device for certain categories of vehicles and certain seating positions.

As a first step, we propose to apply these requirements to the driver seating position of the M1 category of vehicles. This device is already provided in a growing part of the vehicle fleet.

In case where as optional equipment a device is fitted on another category of vehicle or another seating position, the specifications for the driver seating position could apply to this device with, when needed, some specific appropriate characteristics.

The long-term enforcement of this device will need a technical feasibility and economic assessment taking into consideration the technical progress, the consumers' acceptance and the real impact in term of road safety.
