

**UK Proposal to amend TRANS/WP29/2004/26/Rev.1**

DRAFT PROPOSAL FOR THE **05 SERIES OF AMENDMENTS** TO REGULATION No. 16  
(Safety-belts)

**A. PROPOSAL**

**Paragraph 1., amend to read (footnote unchanged):**

"1. SCOPE

This Regulation applies to:

- 1.1. vehicles of category M, N, L2, L4, L5, L6, L7 and T with regard to the installation of safety-belts and restraint systems which are intended for separate use, i.e. as individual fittings, by persons of adult build occupying forward or rearward-facing seats;
- 1.2. safety-belts and restraint systems which are intended for separate use, i.e. as individual fittings, by persons of adult build occupying forward or rearward-facing seats, and are designed for installation in vehicles of category M, N, L2, L4, L5, L6, L7 and T;
- 1.3. vehicles of category M1 and N1 with regard to the installation of child restraint systems and ISOFIX child restraint systems;
- 1.4. vehicles of category M1 with regard to the installation of safety-belt reminder systems."

Insert new paragraphs 2.39. to 2.41., to read:

- "2.39. "Safety-belt reminder system", means a system dedicated to alert the driver when he/she 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 level warning [and a second level warning].
- 2.40. "Tell-tale" means an optical signal that, when activated, indicates the actuation of a device and/or a correct or defective functioning or condition and/or a failure to function.

Insert new paragraph 3.1.2.7., to read:

- "3.1.2.7. In the case of safety-belt reminder systems;
- 3.1.2.8. Detailed description of the system, including wiring diagrams, method(s) of activation and deactivation, and information about how the system can be disabled;
- 3.1.2.9. Drawings showing the location of the safety-belt reminder system tell-tale."

**Paragraphs 3.2.2.1., amend to read:**

"3.2.2.1. ... The description shall mention the colour of the model submitted for approval and specify the vehicle type(s) **and seat location(s)** for which this belt type is intended. ... as part of the belt. **In the case of a safety-belt that is part of a safety-belt reminder system the description shall include information concerning the sensing device for determining that the safety-belt is in use;**"

**Paragraphs 5.2.1., amend to read:**

"5.2.1. ... meets the requirements of paragraph 8. below, and of Annexes **15, 16 and 18** to this Regulation, ..."

**Paragraphs 5.2.2., amend to read:**

"5.2.2. ... Its first two digits (at present **05**) shall indicate the series of amendments ..."

**Paragraphs 5.3.2., amend to read:**

"5.3.2. ... Its first two digits (at present **05**) shall indicate the series of amendments ..."

**Insert new paragraph 5.3.4.2.2.5., to read:**

**5.3.4.2.2.5 the letter "[w]" in the case of safety-belts intend for use as part of a safety-belt reminder system;"**

**Renumber paragraphs 5.3.4.2.2.5. to 5.3.4.2.2.6. as 5.3.4.2.2.6. to 5.3.4.2.2.7.**

**Insert new paragraph 6.2.7., to read:**

"6.2.7. **Safety-belts that are part of a safety-belt reminder system**

6.2.7.1. **Safety-belts for use in a safety-belt reminder system shall recognise that the safety belt is correctly fastened when, at the discretion of the manufacturer, either at least 100mm of the belt has been unreeled from the retractor or the safety-belt buckle is engaged.**

6.2.7.2. **If the safety-belt has an adjustment device for height, the 100mm shall be achieved with the device set in [all positions]/[the highest position].**

**Paragraph 8.1., amend to read:**

"8.1. Safety-belt and restraints systems equipment"

**[Paragraph 8.1.1., amend to read:**

"... seating intended solely for use when the vehicle is stationary, the seats of vehicles of categories M and N \*/ (except those vehicles in categories M<sub>2</sub> and M<sub>3</sub> which are designed for both urban use and standing passengers) must be equipped ..."

**Paragraph 8.1.1., amend the footnote to read:**

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

**Insert new paragraphs 8.4 to 8.4.3., to read:**

**"8.4.        Safety-belt reminder system**

**8.4.1.        General requirements.**

**8.4.1.1.      There shall be a tell-tale [and audible warning].**

**8.4.1.2.      The tell-tale shall be so located as to be readily visible to the driver under daylight conditions.**

**8.4.1.3.      The tell-tale shall be that shown as item 21 of Table 1 of UN-ECE Regulation No.121 or item K.01 in ISO 2575:2004. The tell-tale shall display a steady signal. The colour of the tell-tale shall be yellow or amber.**

**8.4.1.4.      [The audible warning ...]**

**[COMMENT: The use of audible signals raises HMI issues with regards to the correct identification of the 'danger' so that the driver can take the appropriate action, and the 'urgency' of the danger that is present. If audible warnings are to be used, they should be specified in greater detail, so as to be consistent across vehicles and different from other audible warnings that might already be in use or might be used in the future.]**

**8.4.2.        There shall be [two levels] of warning given.**

**8.4.2.1.      First level warning**

**8.4.2.1.1.    shall be given by the tell-tale. [In addition an audible warning may be given.]**

**8.4.2.1.2.    the tell-tale shall be activated for at least 4 seconds, when the driver's safety-belt is not fastened and the engine control is in the "run" state [as tested in accordance with paragraph 1 of Annex 18].**

**8.4.2.2.      [Second level warning**

**8.4.2.2.1.    shall be a tell-tale and audible warning.**

**8.4.2.2.2.    both shall be activated for at least 30 seconds, when the driver's safety-belt is not fastened and the vehicle is in forward motion exceeding 10 km/h, and when at least one of the following criteria is fulfilled:**

**8.4.2.2.2.1. the distance driven has exceeded 500 m;**

**8.4.2.2.2.2. the speed has exceeded 25 km/h; or**

**8.4.2.2.2.3. the engine has been running for more than [60 seconds].]**

**8.4.2.2.3.    [Activation of the second level warning against these criteria shall be tested in accordance with paragraph 2 of Annex 18.]**

**8.4.2.3.      It shall be possible to disable the warnings under the following conditions:**

**8.4.2.3.1.    permanently: only with the use of special tools;**

8.4.2.3.2. temporary: from the driver's seat, such that the warnings remain disabled for a period of time up to a maximum of [30] minutes after the ignition switch has been placed in the 'key-off' position."

**Paragraph 15.**, amend to read:

[Transitional Provisions will be required for a new series of amendments (or for a supplement).]

**Annex 1A.**

**Insert new paragraph 3.3.**, to read:

"3.3. Safety-belt reminder systems

3.3.1. Characteristics: description and drawings of:

3.3.1.1 location of tell-tale:.....

3.3.1.2. type of audible warning used: .....

3.3.1.2. activation criteria employed:.....

3.3.1.3. deactivation criteria employed:..... "

**Annex 1B.**

**Paragraph 1.**, amend to read:

"1. ... upper pillar loop/intended for use with safety-belt reminder systems 3/

**[Annex 2.**

**Paragraph 2.**, amend one of the diagrams and associated text to illustrate the symbol ["w"] for safety-belt intended for use with a safety-belt reminder system.]

**Annex 16.**

**Table.** amend to read:

"

| Vehicle Category | Forward facing seating positions        |                  |   |                  | Rear facing Seating positions |
|------------------|---|------------------|---|------------------|-------------------------------|
|                  | Outboard seating positions              |                  | Centre seating position                 |                  |                               |
|                  | Front                                   | Other than front | Front                                   | Other than front |                               |
| M1               | Ar4m<br>Ar4m[w] (for the driver's seat) | Ar4m             | Ar4m<br>Ar4m[w] (for the driver's seat) | Ar4m             | B, Br3, Br4m                  |
| ...              | ...                                     | ...              | ...                                     | ...              | ...                           |

"

[ Insert a new Annex 18, to read:

"Annex 18.

SAFETY-BELT REMINDER TESTS

1. The first level warning shall be tested according to the following conditions:
  - Safety-belt is not fastened,
  - Engine is stopped or idling and the vehicle is not in forward or reverse motion,
  - Transmission is in neutral position
  - Ignition switch is engaged,
2. The second level warning shall be tested according to the following conditions:
  - Safety-belt is not fastened,
  - Test vehicle driven with one or any combination of the conditions of paragraphs 2.1 to 2.3. of this Annex at the manufacturer's choice.
- 2.1. accelerate the test vehicle to 25 -0/+10 km/h from a halt and continue on the same speed.
- 2.2. the test vehicle is driven forward at least 500 m from a halt position,
- 2.3. the vehicle is tested when its engine has been running for at least [60 seconds],
3. A system that the first level warning stops after a certain period of time, the second level warning shall be tested according to paragraph 2. of this Annex after the first level warning has been deactivated.

A system that the first level warning does not stop after a certain period of time, the second level warning shall be tested according to paragraph 2. of this Annex while the first level warning is activated."]

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**B. JUSTIFICATION**

**Explanatory Note in support of the UK position on Safety-Belt Reminder Systems**

**1. Supplement vs Series of Amendments**

- a) Time to mandatory implementation.

Regardless of whether the proposal is introduced as a supplement or a series of amendments, transitional provisions will have to be introduced of sufficient length to enable all manufacturers to equip all their vehicle models with safety-belt reminder systems on the driver's seats.

Therefore, no time advantage will be achieved by introducing the safety-belt reminder systems as a supplement.

- b) Vehicle vs Component Approval

The vehicle safety-belt reminder system will not function correctly unless an appropriate safety-belt is fitted. Whilst the whole system can be tested and approved for its functionality, safety-belts are

routinely replaced following an accident, and it is essential that safety-belts approved as supporting reminder systems are installed.

Therefore, it is necessary for Regulation 16 to address both the approval of the system as originally installed in the vehicle, and the approval of the safety-belts that 'support' safety-belt reminder systems.

c) Need to identify safety-belt reminder systems equipped vehicles

As safety-belt reminder systems are to be introduced as a new mandatory functionality of a vehicle it normal practice to identify such changes by an increment in the series of amendments, so that from an enforcement view point it is possible to differentiate between vehicles required to comply with the new requirements and those not required to comply.

d) Need to identify safety-belts that will support safety-belt reminder systems

In a particular vehicle model, the left-hand seating positions (front and rear) could potentially use the same safety-belt. However, for left-hand drive vehicles the front seat would be required to support safety-belt reminder systems, whereas for a right-hand drive vehicle it would not.

Therefore, for the purposes of after-market replacement safety-belts, enforcement, and potentially conformity of production, it is important to ensure that appropriate safety belts are used in seating positions that have safety-belt reminder systems installed. This is best achieved by having a unique identifier as part of the approval mark, which can readily be checked.

### Conclusion

The introduction of mandatory safety-belt reminder systems into UN-ECE Regulation 16 must be accompanied by an increment in the series of amendments to enable vehicles required to be fitted with safety-belt reminder systems to be readily identified, and a unique identifier is required to enable the identification of safety-belts that will support safety-belt reminder systems.

This will require amendments to paragraphs 3, 5, 6 and 15, and to Annexes 1A, 1B and 16 (see proposal for draft texts)

## **2. Colour of Tell-Tale and use of Audible Warnings**

The draft gtr concerning hand controls, tell-tales and indicators requires that the following colour code be followed:

Red: danger to persons or very serious damage to equipment is immediate or imminent;

Yellow or amber: caution, outside normal operating limits, vehicle system malfunction, damage to vehicle likely, or other condition which may produce hazard in the longer term;

Green: safe, normal operating condition (except ...).

The UK believes that the tell-tale for the safety-belt reminder system should not be red. Red should be reserved exclusively for those situations where a failure to take action by the driver represents an immediate and imminent risk of danger to the vehicle, driver, vehicle occupants or other road users. Non-fastening of the safety-belt does not represent immediate or imminent danger to the driver. Non-fastening of the safety-belt does represent an increased risk of injury in the event in the event of an accident, but this should be considered only as a hazard in the longer term, as on average people drive many thousands of kilometres without having an accident. Therefore, the tell tale should be YELLOW or AMBER in colour and not red.

On the same basis, the UK has concerns about the use audible warnings by safety-belt reminder systems. In addition, audible warnings are not defined, and there is no definitive means to differentiate between an audible warning which may be part of a safety-belt reminder systems and, for example, a lane departure warning system. Until such differentiation is agreed and harmonised, audible warnings required while the vehicle is in motion should be reserved for situation of immediate and imminent danger

### **3. Disabling of Warning**

There are people that are exempt from wearing safety-belts, either due to the nature of the work they carry out (e.g. taxi drivers) or because they have a medical condition or disability that prevents them from wearing the standard restraint systems fitted to the vehicle.

To cater for such people, it should be possible to disable the safety-belt reminder system warnings, so as to avoid unnecessary annoyance to them. Where the vehicle is used exclusively by that person or for the purpose for which safety-belt wearing is exempt, it should be possible to permanently disable the safety-belt reminder system. In other cases it should be possible to temporarily disable the safety-belt reminder system. In such cases, the safety-belt reminder system should re-set a suitable time ([30] minutes) after key-off to take account of normal work activities, e.g. short breaks between pick-ups for taxi drivers.

### **4. Annex 18**

The UK is of the opinion that information in Annex 18 does not currently justify a separate annex. We believe that it is probably not necessary to specify a test procedure, as this is self-evident from the requirements and the activation/deactivation criteria that the manufacturer has chosen.

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