

Working Party on Passive Safety (GRSP)  
(Fortieth session, 12-15 December 2006,  
agenda item B.1.3.)

PROPOSAL FOR 05 SERIES OF AMENDMENTS OF REGULATION No. 16  
(Safety-belts)

Revision

Note: The text reproduced below was prepared by the experts from France and Japan as offered at the thirty-ninth session of GRSP (ECE/TRANS/WP.29/GRSP/39, para. 20). Its aim is to introduce into Regulation No. 16 requirements concerning the fitting of safety-belt reminders. It is based on document TRANS/WP.29/GRSP/2004/26/Rev1 as modified by informal document No. GRSP-39-17 and on document ECE/TRANS/WP.29/GRSP/2006/4 and includes modifications (**marked in bold characters**) as formulated at the 39<sup>th</sup> session of GRSP.

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**A. PROPOSAL**

The title, amend to read:

"UNIFORM PROVISIONS CONCERNING THE APPROVAL OF:

- I. SAFETY-BELTS, ~~SAFETY-BELT REMINDER~~, RESTRAINT SYSTEMS, CHILD RESTRAINT SYSTEMS AND ISOFIX CHILD RESTRAINT SYSTEMS FOR OCCUPANTS OF POWER-DRIVEN VEHICLES
- II. VEHICLES EQUIPPED WITH SAFETY-BELTS, **SAFETY-BELT REMINDER**, RESTRAINT SYSTEMS, CHILD RESTRAINT SYSTEMS AND ISOFIX CHILD RESTRAINT SYSTEMS"

Paragraph 1., amend to read:

"1. This Regulation applies .....

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

**Contracting Parties may allow deactivation of the safety-belt reminder provided that such deactivation satisfies requirements of paragraph 8.4.2.6."**

Insert new paragraphs 2.39. to 2.45., to read:

"2.39. "Safety-belt Reminder", 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. "Visual warning" means a warning by visual signal (lighting, blinking or visual display of symbol or message).
- 2.41. "Audible warning" means a warning by sound signal.
- 2.42. "First level warning" means a visual warning activated when the ignition switch is engaged (engine running or not) and the driver's safety-belt is not fastened. An audible warning can be added as an option.
- 2.43. "Second level warning" means a visual and audible warning activated when a driver operates a vehicle without fastening the safety-belt.
- 2.44. "Safety-belt is not fastened" means, at the option of the manufacturer, either the driver safety-belt buckle is not engaged or the webbing length pulled out of the retractor is 100 mm or less.
- 2.45. "**Vehicle is in normal operation**" means that vehicle is in forward motion at the speed greater than 10 km/h."

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

***"An approval number ..... Its first two digits (at present 05 corresponding to the 05 series of amendments) ..... above."***

Paragraph 8.1., including a new footnote \*/, 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~~ **this** Regulation.

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\*/ 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 8.4.2. to 8.4.2.5. to read :

"8.4.2. Safety-belt Reminder.

8.4.2.1. General requirements.

- 8.4.2.1.1 Visual warning shall be so located as to be readily visible and recognisable in the daylight by the driver and distinguishable from other alerts. *Where the visual signal warning employs the colour red it shall also use a symbol in accordance with item 21 in table 1 of ECE R121.*



(item K.01 - ISO 2575:2000) or,



- 8.4.2.1.2. Visual warning shall be by continuous or intermittent signal.
- 8.4.2.1.3. Audible warning shall be by continuous or intermittent sound signal or by vocal information. *Where vocal information is employed, the manufacturer shall ensure that the alert uses the national language of the market into which the vehicle is sold.* This ~~signal~~ *audible warning* may be constituted by more than one step.
- 8.4.2.1.4. Audible warning shall ~~have a loud and clear signal so as to~~ be easily recognized by the driver.
- 8.4.2.2. 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.
- 8.4.2.3. The activation of the first level warning shall be tested according to the test procedure defined in Annex 18, paragraph 1.
- 8.4.2.4. Second level warning shall be a visual and audible signal activated for 30 seconds or longer **except for cases in which the warning stops for over 3 seconds** when the safety-belt is not fastened, when the vehicle is in ~~forward motion~~ **normal operation** and when at least one of the following conditions (or any combination of these conditions) ~~depending on the manufacturer's choice~~, is fulfilled:
- 8.4.2.4.1. distance driven greater than distance threshold; threshold  $\leq 500$  m. ~~Depending on the manufacturer's choice, the distance the vehicle is not in normal operation may~~ **shall** be excluded.
- 8.4.2.4.2. speed greater than speed threshold; threshold  $\leq 25$  km/h.
- 8.4.2.4.3. duration time (engine running) greater than duration time threshold; threshold  $\leq 60$  seconds.  
~~Depending on the manufacturer's choice, the first level warning duration time and the duration time the vehicle is not in normal operation may~~ **shall** be excluded.
- 8.4.2.5. The activation of the second level warning shall be tested according to the test procedure defined in Annex 18, paragraph 2.
- 8.4.2.6 The Safety-belt Reminder may be designed to allow deactivation.

- 8.4.2.6.1 In the case a short term deactivation is provided, it shall be more difficult to deactivate the Safety-belt Reminder than buckling the Safety-belt on and off. When the ignition is switched off for more than **30 minutes** and switched on again, a short term deactivated Safety-belt Reminder must reactivate.
- 8.4.2.6.2 In the case a long term deactivation is provided, it shall require a sequence of operations to deactivate which *requires the use of tools (mechanical, electrical, digital, etc.) that are not provided with the vehicle* ~~shall not be guessed at or carried out accidentally.~~

**Insert new paragraphs 15.2.9. to 15.2.14. in section 15.2. to read :**

#### 15.2. Installation of safety-belts

These transitional provisions only apply to the installation of safety-belts on vehicles and do not change the mark of the safety-belt.

**“15.2.9. As from the official date of entry into force of the 05 series of amendments, no Contracting Party applying this Regulation shall refuse to grant ECE approvals under this Regulation as amended by the 05 series of amendments.**

**15.2.10. As from 18 months after the date of entry into force, Contracting Party applying this Regulation shall grant approvals only if the vehicle type to be approved meets the requirements of this Regulation as amended by the 05 series of amendments.**

**15.2.11. As from 72 months after the date of entry into force of the 05 series of amendments to this Regulation, approvals to this Regulation shall cease to be valid, except in the case of vehicle types which comply with the requirements of this Regulation as amended by the 05 series of amendments.**

**15.2.12. Notwithstanding paragraph 15.2.11, approvals of the vehicle categories other than M1 to the preceding series of amendments to the Regulation which are not affected by the 05 series of amendments related to the requirements concerning the fitting of safety-belt reminders shall remain valid and Contracting Parties applying the Regulation shall continue to accept them.**

**15.2.13. Notwithstanding paragraph 15.2.11, approvals of the vehicle categories other than N2 and N3 to the preceding series of amendments to the Regulation which are not affected by the 05 series of amendments related to minimum requirements for safety-belts and retractors in Annex 16 shall remain valid and Contracting Parties applying the Regulation shall continue to accept them.**

**15.2.14. Even after the date of entry into force of the 05 series of amendments, approvals of the components and separate technical units to the preceding series of amendments to the regulation shall remain valid and Contracting Parties applying the regulation shall continue to accept them.”**

*15.2.15. From the date of entry into force of this Regulation, by way of derogation to the obligations of Contracting Parties during the transitional period set out in paragraph 15.2.11. a Contracting Party may prohibit the placing on the market of vehicles which do not meet the installation requirements of the 05 series of amendment.*

**Annexe 1A, amends to read:**

"Communication

(...)

3. Bodywork

(...)

3.1. Seats

(...)

3.2. Safety-belts and/ or other restraint systems

(...)

3.2.1. Number and position of safety-belts and restraint systems and seats on which they can be used: .....

**3.3. Driver's Seat belt Reminder (indicate Yes / No)**

(...)

**Annex 2 ARRANGEMENTS OF THE APPROVAL MARKS:**

*In paragraph 1 replaces in model 1 and model 2 the 04 by 05*

**Annex 16, the table, amends to read:**

**"Annex 16**

**MINIMUM REQUIREMENTS FOR SAFETY BELTS AND RETRACTORS**

Vehicle Category	Forward facing seating positions				Rear facing Seating positions
	Outboard seating positions		Centre seating positions		
	Front	Other than front	Front	Other than front	
....	....	....	....	....	....
N2	<del>B</del> Br3, Br4m, Br4Nm or	....	....	....	....
N3	<del>A</del> Ar4m,Ar4Nm*	....	....	....	....
	....	....	....	....	....

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~~ ***the vehicle is in normal operation*** 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

### Principles

#### 1. Safety-belt reminder

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 to be relevant to define harmonized requirements with regard to a mandatory system to alert the passengers when they do not use the safety-belt.

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

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

- a first level characterized by a visual signal completed as an option with an audible signal,
- a second level characterized by a visual and an audible signal.

The system shall be designed in such a way that it provides assistance to the passengers and creates a reflex for the use of the safety-belts. The target is that an increased number of people realize the benefits of the safety-belt and actually use it.

The system should not give rise to any rejection by the user or incitation to bypass or damage the system.

#### 2. Minimum requirements for safety-belts and retractors

**With regard to the minimum requirements for safety belts and retractors in Annex 16, Japan is currently considering adopting Regulation No. 16 into its national regulations. However, the Japanese safety regulation and Regulation No. 16 differ from each other in the fact that the Japanese safety regulation requires, from a standpoint of ensuring the driver's safety in the event of a collision, the mandatory installation of an emergency locking retractor (ELR) at the driver's seat of category N2 and N3 vehicles, whereas Regulation No. 16 does not require such mandatory installation of ELRs.**

### Scope

The final objective is that these requirements be applicable to all categories of vehicle which have to comply with the mandatory safety-belt fitting and use requirements by all passengers of the vehicle. **The requirements apply only to the vehicles equipped with safety-belt reminders.**

Nevertheless, the enforcement of these new requirements should be progressive, taking into consideration the possible technical and cost barriers of the feasibility of fitting such a device for certain categories of vehicles and for certain seating positions.

As a first step, these requirements should be applied to the driver seating position of the M1 category of vehicles. A large part of the vehicle fleet of this category is already provided with it.

**Contracting Parties may allow deactivation of the safety-belt reminder.**

In the case when the device is fitted as optional equipment on to another category of vehicle or to another seating position, the specifications for the driver seating position should be applied with appropriate modifications, if necessary.

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

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