

Proposal for supplement 1 to the original version and for supplement 1 to the 1 series of amendments to UN Regulation No. 174 (Safety-belt reminders)

The text reproduced below was prepared by the expert from Germany on behalf of the TF GRSP AVRS, to enable the application of the regulation to vehicles equipped with an ADS. The modifications to the existing text of the UN Regulation are marked in bold for new or strikethrough for deleted characters.

I. Proposal

0. Introduction

Paragraph 0.1., amend to read:

“0.1. For the original version of UN Regulation No. 174

0.1.1. During the seventy-third session of the Working Party on Passive Safety (GRSP) held in May 2023, it was decided to split UN Regulation No. 16 into three UN Regulations:

- (a) safety-belts and restraint systems (components);
- (b) safety-belts and child restraint systems installation (vehicle);
- (c) safety-belt reminders (vehicle).

0.1.2. UN Regulation No. ~~XXX~~ **174** consists of the specific requirements and approval process of a vehicle type with regard to its safety-belt reminders. The requirements are derived from UN Regulation No. 16 as amended by the 09 series of amendments. From a technical point of view, the requirements are identical. Therefore, it is important to define clear transitional provisions in the updated UN Regulation No. 16 as amended by the 10 series of amendments, explaining the equivalence between approvals issued according to this UN Regulation and UN Regulation No. 16 as amended by the 09 series of amendments.”

Insert a new paragraph 0.2., to read:

“0.2. For the 01 series of amendments:

0.2.1. **The amendment of paragraph 5.1.3. aims to clarify which folding seats are exempt from the SBR requirements. The wording "fitted in the access passages of vehicles of category M2 or M3" means to cover folding seats located in the entry and exit areas of buses and coaches, as well as folded or stowed seats for occasional usage in the aisle areas of such vehicles. The wording "fitted to N1 or N2 for the safe ingress and egress of the driver via the front passenger door" means to cover folding seats that can typically be found in delivery vans, and where this front passenger door is frequently used by the driver to safely exit the vehicle (on the vehicle side away from traffic).**

0.2.2. **The first level warning shall be activated whether the transmission is in neutral position or not. Hence Annex 3; 1. (c) is deleted.**

0.2.3. **For vehicles equipped without conventional devices to activate propulsion systems, "vehicle master control switch" definition is harmonized with other regulations, such as UN Regulation No. 159 and revised "master control switch" to "vehicle master control switch" in the text.**

0.2.4. **In the case of a remotely activated vehicle master control switch, the first cycle of the initial warning may already have ended before the driver**

enters the vehicle. The addition to paragraph 5.2.3.1. ensures that a driver will still receive the initial warning when entering the vehicle.

- 0.2.5. During an emergency call, it should be possible to have a clear voice communication inside the vehicle without additional audible warnings.”**

Insert a new paragraph 0.3., to read:

- “0.3. For supplement 1 to the original version and supplement 1 the 01 series of amendments:**

- 0.3.1 The Regulation is amended to account for vehicles of category X. The scope is updated to reflect that this Regulation does not apply to vehicles of category Y, since no occupants are inside the vehicle under any circumstances.**

- 0.3.2. The Regulation was originally drafted for vehicles with driver and manual driving controls and it is the intention of this new amendment to keep the spirit of the regulation and to extend its application to vehicles without driver and manual driving controls. In the absence of driver/manual driving controls, provisions related to them shall not be taken into account if not already covered by this amendment.**

- 0.3.3. In case of vehicles with an ADS where those vehicles are also equipped with a manual driving mode operating at a speed of more than 6 km/h it is expected that in the manual driving mode the technical requirements can be applied as they would for a conventional vehicle. In a mode where an ADS feature is active the relevant ADS requirements have to be fulfilled.**

- 0.3.4. Paragraph 2.1. modified, as provisions are part of paragraph 5.”**

Paragraph 1., amend to read:

- “1. Scope**

This Regulation applies to all seating positions in vehicles of categories M and N fitted with safety belt with regard to safety-belt reminders. This Regulation does not apply to vehicles of category Y¹.”

Paragraph 1, footnote 1, amend to read:

- “¹ As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3.), document ECE/TRANS/WP.29/78/Rev.78, para. 2 - <https://unece.org/transport/vehicle-regulations/wp29/resolutions>”**

Paragraph 2.1., amend to read:

- “2.1. “Safety-belt reminder”, means a system dedicated to alert the driver when any of the occupants do 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.~~”**

*Paragraph **2.18.1**, amend to read:*

- “**2.14.1** “A front passenger seat” means any seat where the “foremost H-point” of the seat in question is in or in front of the vertical transverse plane through the driver’s R-point. For vehicles of category X, the “R” point of the most forward passenger seat shall be taken instead of the R-point of the driver’s seat.”**

[Insert new paragraphs 2.19. and 2.20., to read:

- “2.19. “ADS feature of type 1 (ADSF-1)” means an ADS¹ feature which includes an ADS fallback response requiring a fallback user.**

- 2.20. “ADS feature of type 2 (ADSF-2)” means an ADS feature which does not include an ADS fallback response requiring a fallback user.”]**

Paragraph 8.4.1.1, amend to read:

“5.1 Safety-belt reminder equipment

5.1.1 Requirements per specific seating position and exemptions”

The seating position of the driver (**if applicable**) of M and N categories of vehicles³ ~~as well as and the seating positions of the front passengers occupants of seats in the same row as the driver seat~~ of M and N categories of vehicles shall be equipped with a safety-belt reminder satisfying the requirements of paragraph 5.3.”

Paragraph 5.1.3., amend to read:

“5.1.3. A safety-belt reminder is not compulsory on folding seats (i.e. normally folded or stowed and designed for occasional use, fitted in the access passages of vehicles of category M2 or M3, or fitted to N1 or N2 for the safe ingress and egress of the driver via the front passenger door as well as seating positions fitted with an S-type belt (including Harness belt).”

Insert a new paragraph 5.1.4., to read:

“5.1.4. **An ADS may control the safety belt reminder provided the ADS complies with the technical requirements of UN Regulation No. [XXX].**”

Paragraph 5.2.1.1., amend to read:

“5.2.1.1. The visual warning shall be so located as to be readily visible and recognisable in the daylight and at night time by the driver and distinguishable from other alerts. **Whilst an ADS[F-2] [feature] is active, the warning shall be transmitted as a logic signal to the ADS.**”

Paragraph 5.2.2.2., amend to read:

“5.2.2.2. ~~The a~~Audible warning shall be easily recognized by the driver (**if applicable**). **Whilst an ADS[F-2] [feature] is active, the audible warning shall be easily recognisable by the passengers.**”

Paragraph 5.3. amend to read:

“5.3. Safety-belt reminder for **the seating position of the driver (if applicable) and the seating positions of the front passengers** ~~occupants of seats in the same row as the driver.~~”

Paragraph 5.2.3.1., amend to read:

“5.2.3.1. The first level warning shall be at least a visual warning activated for 30 seconds or longer for seating positions covered by paragraph 5.1.1. and for 60 seconds or longer for seating positions covered by paragraph 5.1.2. when the safety-belt of any of the seats is not fastened and the ignition switch or master control switch is activated.

If the driver is performing the DT and if the vehicle master control switch has been activated remotely, the first level warning shall be (re-)initiated once the driver has entered the vehicle or driver presence is detected.”

Paragraph 5.3.1. amend to read:

“5.3.1. Safety-belt reminders for **the seating position of the driver (if applicable) and the seating positions of the front passengers** ~~occupants of seats in the same row as the driver~~ shall fulfil the requirements set out in paragraph 5.2.”

Paragraph 5.4.2. amend to read:

“5.4.2. The visual warning shall indicate at least all rear seating positions to allow the driver to identify, while facing forward as seated on the driver seat, any seating position in which the safety-belt is unfastened. **Whilst an ADS[F-2] [feature] is active, the warning shall be transmitted as a logic signal to the ADS.** For vehicles that have information on the occupancy status of the rear seats, the

visual warning does not need to indicate unfastened safety-belts for unoccupied seating positions. For seats, which can be fixed to different designated seating positions within the vehicle (e.g. floor rail mounted), the visual warning shall at least indicate when any rear safety belt is unfastened.”

Annex 3, 1. (e) amend to read:

- “ (e) A load of 40 kg is placed on each seat cushion **for the seating position of the driver (if applicable) and the seating positions of front passengers** ~~occupants of seats in the same row as the driver's seat~~, or the state in which occupants are on board the vehicle is simulated by an alternative method specified by the vehicle manufacturer, provided an occupant's load does not exceed 40 kg. This may also be done for the rear seats at the request of the vehicle manufacturer; Or alternatively (at the choice of the manufacturer):

An object or human representing a 5th percentile adult female is placed on each seat cushion as specified by the manufacturer **for the seating position of the driver (if applicable) and the seating positions of front passengers** ~~occupants of seats in the same row as the driver seat~~, or the state in which occupants are on board the vehicle is simulated by an alternative method specified by the vehicle manufacturer as agreed by the Technical Service and the Type Approval Authority. This may also be done for the rear seats at the request of the vehicle **manufacturer.”**

Annex 3, 2.2., amend to read:

- “2.2. Testing the seating position(s) ~~in the same row as the driver's seat~~ **of front passengers.**

- 2.2.1. Testing the seat(s) ~~in the same row as the driver's seat~~ **of front passengers** when the safety-belt is unfastened before the journey:

- (a) The safety-belt(s) of the seat(s) ~~in the same row as the driver's seat~~ **of front passengers** is/are not fastened;
- (b) The safety-belts of the seats ~~other than the seat(s) in the same row as the driver's seat~~ **of front passengers** are fastened;
- (c) A load of 40 kg is applied to the seats **of front passengers** ~~(s) in the same row as the driver's seat~~, or the state in which occupants are on board the vehicle is simulated by a method specified by the manufacturer;

Or alternatively (at the choice of the manufacturer):

An object or human representing a 5th percentile adult female is placed on each seat cushion as specified by the manufacturer **for front passengers** ~~in the same row as the driver seat~~, or the state in which occupants are on board the vehicle is simulated by an alternative method specified by the vehicle manufacturer as agreed by the Technical Service and the Type Approval Authority. This may also be done for the rear seats at the request of the vehicle manufacturer.

- (d) The test vehicle is driven, at the choice of the manufacturer, under one of the conditions in paragraphs 2.1.1.1. to 2.1.1.3. of this annex or combination thereof;
- (e) The state of the safety-belt reminder is checked for all of the seats **of front passengers** ~~(s) in the same row as the driver's seat~~, in conditions (a) to (d).

- 2.2.2. Testing the seating position **of front passengers** ~~in the same row as the driver's seat~~ when the safety-belt becomes unbuckled during the journey:

- (a) The safety-belts of the driver's seat and seats **for front passengers** ~~other than the driver's seat~~ are fastened;
- (b) A load of 40 kg is applied to the seats **of front passengers** ~~(s) in the same row as the driver's seat~~, or the state in which occupants are on board the vehicle is simulated by a method specified by the manufacturer;

Or alternatively (at the choice of the manufacturer):

An object or human representing a 5th percentile adult female is placed on each seat cushion as specified by the manufacturer **of front passengers** ~~in the same row as the driver seat~~, or the state in which occupants are on board the vehicle is simulated by an alternative method specified by the vehicle manufacturer as agreed by the Technical Service and the Type Approval Authority. This may also be done for the rear seats at the request of the vehicle manufacturer.
- (c) The test vehicle is driven, at the choice of the manufacturer, under one of the conditions in paragraphs 2.1.1.1. to 2.1.1.3. of this annex or combination thereof;
- (d) The safety-belt(s) of the seats **of front passengers** ~~in the same row as the driver's seat~~ is (are) unbuckled;
- (e) The state of the safety-belt reminder is checked for all of the seats **of front passengers** ~~(s) in the same row as the driver's seat~~, for each condition (a) to (d)."

Annex 3, 2.3. amend to read:

"2.3. Testing the rear seats:

- (a) With the test vehicle stationary, the safety-belts of all seats are fastened;
- (b) The test vehicle is put in normal operation and kept running;
- (c) The safety-belt of one of the rear seats is unfastened;
- (d) The functioning of the safety-belt reminder is checked for all of the seating positions in all seating rows;
- (e) Alternatively, at the request of the vehicle manufacturer, the test procedures specified in paragraphs 2.2. to 2.2.2. for the seating position **of front passengers** ~~(s) in the same row as the driver's seat~~ may be used for any rear seating position instead."

II. Justification

See paragraph 0. in the proposal.