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1958 Agreement :

Consideration of draft amendments

to existing Regulations submitted by GRSP

Proposal for 07 series of amendments to Regulation No. 16 (Safety-belts, ISOFIX and i-Size)

Submitted by the Working Party on Passive Safety *

The text reproduced below was adopted by the Working Party on Passive Safety (GRSP) at its fifty-ninth session (ECE/TRANS/WP.29/GRSP/59, para. 20). It is based on ECE/TRANS/WP.29/GRSP/2016/2 as amended by Annex II to the report. It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Administrative Committee AC.1 for consideration.

* In accordance with the programme of work of the Inland Transport Committee for 2016–2017 (ECE/TRANS/254, para. 159 and ECE/TRANS/2016/28/Add.1, cluster 3.1), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

07 series of amendments to Regulation No. 16 (Safety-belts, ISOFIX and i-Size)

Paragraph 1.4., amend to read and delete the footnote:

- "1.4. All seating positions in vehicle categories M and N fitted with safety belt with regard to safety belt reminder."

Paragraph 2.41., amend to read:

- "2.41. "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."

Paragraphs 2.44. to 2.46., amend to read:

- "2.44. "First level warning" means a visual warning activated when the ignition switch or master control switch is activated and any of the occupants' safety-belt is not fastened. An audible warning can be added as an option.
- 2.45. "Second level warning" means a visual and audible warning activated when the vehicle is operated in accordance with paragraphs 8.4.2.4.1.1. to 8.4.2.4.1.3. with the safety-belt for any of the front row occupants being unfastened and the safety-belt for any of the rear row occupants either being or becoming unfastened.
- 2.46. "Safety-belt is unfastened" means, at the option of the manufacturer, either the safety-belt buckle of any occupant is not engaged or the length of the pulled out webbing is less than the length of the webbing which is needed to buckle an un-occupied seat in the rear most seating position."

Paragraph 5.2.2., amend to read:

- "5.2.2. An approval number shall be assigned to each type approved. Its first two digits (at present 07 corresponding to the 07 series of amendments) shall indicate the series of amendments ..."

Paragraphs 8.4.1. and 8.4.1.1., shall be deleted

Insert new paragraphs 8.4.1. to 8.4.1.3., to read:

- "8.4.1. Requirements per specific seating position and exemptions
- 8.4.1.1. The seating position of the driver of M and N categories of vehicles¹⁰ as well as the seating positions of the 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 8.4.3.
- 8.4.1.2. All seating positions of the rear seat row(s) of M₁ and N₁ category vehicles¹⁰ shall be equipped with a safety-belt reminder satisfying the requirements of paragraph 8.4.4.
- Where the vehicle manufacturer provides a safety-belt reminder system on a rear seating position in another category of vehicle, the safety-belt reminder system may be approved according to this Regulation.
- 8.4.1.3. A safety-belt reminder is not compulsory on folding seats (i.e. normally folded and designed for occasional use, e.g. foldable crew seats in the buses and coaches) as well as seating positions fitted with an S-type belt (including Harness belt).

Notwithstanding paragraphs 8.4.1.1. and 8.4.1.2 above, safety belt reminders are also not required for rear seats in ambulances, hearses, and motor-caravans as well as for all seats for vehicles used for transport of disabled persons, vehicles intended for use by the armed services, civil defence, fire services and forces responsible for maintaining public order.

¹⁰ As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3.), document ECE/TRANS/WP.29/78/Rev.4, para. 2 - www.unece.org/trans/main/wp29/wp29wgs/wp29gen/wp29resolutions.html

Paragraphs 8.4.2., amend to read:

"8.4.2. General requirements"

Paragraph 8.4.2.1., amend to read:

"8.4.2.1. Visual warning"

Paragraph 8.4.2.1.1., amend to read:

"8.4.2.1.1. 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."

Paragraph 8.4.2.1.2., amend to read:

"8.4.2.1.2. The visual warning shall be a steady or flashing tell-tale."

Insert new paragraph 8.4.2.2., to read:

"8.4.2.2. Audible warning"

Paragraph 8.4.2.1.3., renumber as 8.4.2.2.1. and amend to read:

"8.4.2.2.1. The audible warning shall consist of a continuous or an intermittent (pauses shall not exceed 1 second) sound signal or of continuous vocal information. Where vocal information is employed, the vehicle manufacturer shall ensure that the alert is able to employ the languages of the market into which the vehicle is intended to be placed."

Paragraph 8.4.2.1.4., renumber as 8.4.2.2.2. and amend to read:

"8.4.2.2.2. The audible warning shall be easily recognized by the driver."

Insert new paragraph 8.4.2.3., to read:

"8.4.2.3. First level warning"

Paragraph 8.4.2.2., renumber as 8.4.2.3.1. and amend to read:

"8.4.2.3.1. The first level warning shall be at least a visual warning activated for 30 seconds or longer for seating positions covered by paragraph 8.4.1.1. and for 60 seconds or longer for seating positions covered by paragraph 8.4.1.2. when the safety-belt of any of the seats is not fastened and the ignition switch or master control switch is activated."

Insert a new paragraph 8.4.2.3.2., to read:

"8.4.2.3.2. The first level warning may be discontinued when

- (i) None of the safety-belts which triggered the warning are unfastened,
- or

- (ii) The seat or seats which triggered the warning are no longer occupied."

Paragraph 8.4.2.3., renumber as 8.4.2.3.3.

Insert a new paragraph 8.4.2.4., to read:

"8.4.2.4. Second level warning"

Paragraph 8.4.2.4., renumber as paragraph 8.4.2.4.1. and amend to read:

"8.4.2.4.1. The second level warning shall be a visual and audible signal activated for at least 30 seconds not counting periods in which the warning may stop for up to 3 seconds when at least one or any combination of the conditions at the choice of manufacturer, set out in paragraphs 8.4.2.4.1.1. to 8.4.2.4.1.3. is/are fulfilled. The second level warning shall supersede the first level warning when the first level warning is still active."

Paragraphs 8.4.2.4.1. to 8.4.2.4.3., renumber as 8.4.2.4.1.1. to 8.4.2.4.1.3. and amend to read:

"8.4.2.4.1.1. The distance driven greater than the distance threshold. The threshold shall not exceed 500 m. The distance driven when the vehicle is not in normal operation shall be excluded."

8.4.2.4.1.2. The vehicle speed greater than the speed threshold. The threshold shall not exceed 25 km/h.

8.4.2.4.1.3. The duration time (engine running, propulsion system activated, etc.) is greater than the duration time threshold. The threshold shall not exceed 60 seconds. The first level warning duration time and the duration time when the vehicle is not in normal operation shall be excluded."

Insert new paragraphs 8.4.2.4.2. to 8.4.2.4.5., to read:

"8.4.2.4.2. The thresholds to trigger safety belt reminder listed in paragraphs 8.4.2.4.1.1. to 8.4.2.4.1.3., may be reset when :

- (i) Any of the doors have been opened while the vehicle is not in normal operation or
- (ii) The seat or seats which triggered the warning are no longer occupied.

8.4.2.4.3. The second level warning may be discontinued when

- (i) None of the safety-belts which triggered the warning are unfastened,
- (ii) The vehicle ceases to be in normal operation, or
- (iii) The seat or seats which triggered the warning are no longer occupied.

8.4.2.4.4. The second level warning shall be resumed for the remainder of the required duration when one or any combination of the conditions, at the choice of the manufacturer, set out in paragraphs 8.4.2.4.1.1. to 8.4.2.4.1.3. is/are again fulfilled.

8.4.2.4.5. For the condition that a safety belt becomes unfastened pursuant to paragraphs 8.4.3.3. and 8.4.4.5., the thresholds set out in paragraphs 8.4.2.4.1.1. to 8.4.2.4.1.3. shall be measured from the point in time at which unfastening occurs."

Paragraph 8.4.2.5., renumber as 8.4.2.4.6.

Insert new paragraphs 8.4.3. to 8.4.4.5., to read:

- "8.4.3. Safety-belt reminder for driver and occupants of seats in the same row as the driver
- 8.4.3.1. Safety-belt reminders for driver and occupants of seats in the same row as the driver shall fulfil the requirements set out in paragraphs 8.4.2.
- 8.4.3.2. The colour and symbol of the visual warning shall be as defined in item 21 in Table 1 of Regulation No. 121.
- 8.4.3.3. The second level warning shall be activated when a safety-belt is or becomes unfastened while the vehicle is in normal operation and while, at the same time, any one condition or any combination of the conditions, at the choice of the manufacturer, set out in paragraphs 8.4.2.4.1.1. to 8.4.2.4.1.3. is satisfied.
- 8.4.4. Safety-belt reminder for occupants of rear seat row(s).
- 8.4.4.1. Safety-belt reminders for occupants of rear row(s) shall fulfil the requirements set out in paragraphs 8.4.2.
- 8.4.4.2. 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. 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.
- 8.4.4.3. The colour of the visual warning may be other than red and the symbol of the visual warning for safety-belts covered by paragraph 8.4.1.2 may contain different symbols other than defined in Regulation No.121. In addition, the first level warning of seating positions covered by paragraph 8.4.1.2 may be cancellable by the driver.
- 8.4.4.4. A common tell-tale may be used for safety-belts covered by paragraphs 8.4.1.1 and 8.4.1.2.
- 8.4.4.5. The second level warning shall be activated when a safety-belt becomes unfastened while the vehicle is in normal operation and while, at the same time, any one condition or any combination of the conditions, at the choice of the manufacturer, set out in paragraphs 8.4.2.4.1.1. to 8.4.2.4.1.3. is satisfied."

Paragraphs 8.4.2.6. to 8.4.2.6.2., renumber as 8.4.5. to 8.4.5.2. and amend to read:

- "8.4.5. The safety-belt reminder may be designed to allow deactivation.
- 8.4.5.1. In the case that a short term deactivation is provided, it shall be significantly more difficult to deactivate the safety-belt reminder than buckling the safety-belt on and off (i.e. it shall consist of an operation of specific controls that are not integrated in the safety-belt buckle) and this operation shall only be possible when the vehicle is stationary. When the ignition or master control switch is deactivated for more than 30 minutes and activated again, a short-term deactivated safety-belt reminder shall reactivate. It shall not be possible to provide short term deactivation of the relevant visual warning(s).
- 8.4.5.2. In the case that a facility for a long term deactivation is provided, it shall require a sequence of operations to deactivate, that are detailed only in the manufacturer's technical manual and/or which requires the use of tools (mechanical, electrical, digital, etc.) that are not provided with the vehicle. It shall not be possible to provide long term deactivation of the relevant visual warning(s)"

Insert new paragraphs 15.4. to 15.10., to read:

- "15.4 As from the official date of entry into force of the 07 series of amendments, no Contracting Party applying this UN Regulation shall refuse to grant or refuse to accept UN type approvals under this UN Regulation as amended by the 07 series of amendments. Contracting Parties shall continue to grant extensions of approvals to the preceding series of amendment.
- 15.5 As from 1 September 2019, Contracting Parties applying this UN Regulation shall not be obliged to accept UN type approvals to the preceding series of amendments that were first issued on or after 1 September 2019.
- 15.6. A safety-belt reminder is not compulsory on removable rear seats and on any seat in a row in which there is a suspension seat, for the purpose of granting type-approval to the 07 series of amendment, until 1 September 2022.
- 15.7 Until 1 September 2021, Contracting Parties applying this UN Regulation shall accept UN type approvals to the preceding series of amendments that were first issued before 1 September 2019
- 15.8 As from 1 September 2021, Contracting Parties applying this Regulation shall not be obliged to accept type approvals issued to the preceding series of amendments to this Regulation.
- 15.9. Notwithstanding paragraph 15.8, Contracting Parties applying the UN Regulation shall continue to accept UN type approvals of safety-belts and restraint systems to the preceding series of amendments to the UN Regulation.
- 15.10 Notwithstanding paragraph 15.8, Contracting Parties applying the UN Regulation shall continue to accept UN type approvals to the preceding series of amendments to the UN Regulation, for vehicles which are not affected by the changes introduced by the 07 series of amendments."

Annex 2, amend to read:

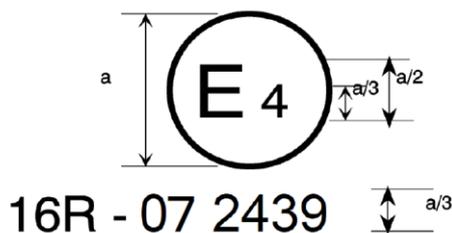
"Annex 2

Arrangements of approval marks

1. Arrangements of the vehicle approval marks concerning the installation of safety-belts

Model A

(See paragraph 5.2.4. of this Regulation)

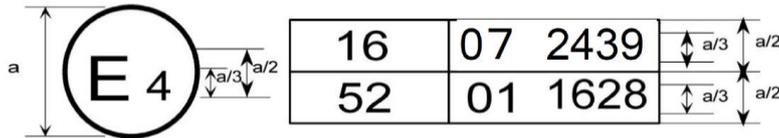


a = 8 mm min.

The above approval mark affixed to a vehicle shows that the vehicle type concerned has, with regard to safety-belts, been approved in the Netherlands (E 4) pursuant to Regulation No. 16. The approval number indicates that the approval was granted according to the requirements of Regulation No. 16 as amended by the 07 series of amendments.

Model B

(See paragraph 5.2.5. of this Regulation)



The above approval mark affixed to a vehicle shows that the vehicle type concerned has been approved in the Netherlands (E 4) pursuant to Regulations Nos. 16 and 52.¹ The approval numbers indicate that, at the dates when the respective approvals were given, Regulation No. 16 included the 07 series of amendments and Regulation No. 52 the 01 series of amendments.

...

¹ The second number is given merely as an example."

Annex 18,

Paragraph 1., amend to read:

- "1. The first level warning shall be tested according to the following conditions:
- (a) Safety-belt is not fastened;
 - (b) Engine or propulsion system is stopped or idling, and the vehicle is not in forward or reverse motion;
 - (c) Transmission is in neutral position;
 - (d) Ignition switch or master control switch is activated.
 - (e) A load of 40 kg is placed on each seat cushion 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 female¹ is placed on each seat cushion as specified by the manufacturer 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 approval authority. This may also be done for the rear seats at the request of the vehicle manufacturer.

- (f) The state of the safety-belt reminder is checked for all of the relevant seat(s), in conditions (a) to (e).

¹ The technical specifications and detailed drawings of Hybrid III, corresponding to the principal dimensions of a fifth percentile female of the United States of America, and the specifications for its adjustment for this test are deposited with the Secretary-General of the United Nations and may be consulted on request at the secretariat of the Economic Commission for Europe, Palais des Nations, Geneva, Switzerland. A female who weighs between 46.7 and 51.25 kg, and who is between 139.7 and 150 cm tall may be used."

Paragraph 2., amend to read:

"2. The second level warning shall be tested according to the conditions set out in paragraphs 2.1. to 2.3. of this Annex, respectively."

Paragraphs 2.1. to 2.3., shall be deleted.

Insert new paragraphs 2.1. to 2.3., to read:

- "2.1. Testing the driver's seating position
 - 2.1.1. Testing the driver's seat when the safety-belt is unfastened before the journey
 - (a) The safety-belt of the driver's seat is not fastened;
 - (b) The safety-belts of seats other than the driver's seat are fastened;
 - (c) Test vehicle driven with one or any combination of the conditions of paragraphs 2.1.1.1. to 2.1.1.3. of this annex at the manufacturer's choice.
 - (d) The state of the safety-belt reminder is checked for the driver's seat, in conditions (a) to (c).
 - 2.1.1.1. Accelerate the test vehicle to 25 -0/+10 km/h from a halt and continue on the same speed.
 - 2.1.1.2. The test vehicle is driven forward at least 500m from a halt position.
 - 2.1.1.3. The vehicle is tested when the vehicle is in normal operation for at least 60 seconds.
 - 2.1.2. Testing the driver's seat when the safety-belt becomes unbuckled during the journey.
 - (a) The safety-belts of the driver's seat and seats other than the driver's seat are fastened.
 - (b) 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 a combination thereof;
 - (c) The safety-belt of the driver's seat is unbuckled.
- 2.2. Testing the seating position(s) in the same row as the driver's seat
 - 2.2.1. Testing the seat(s) in the same row as the driver's seat 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 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 are fastened;

- (c) A load of 40 kg is applied to the seat(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 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 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 seat(s) in the same row as the driver's seat, in conditions (a) to (d).

2.2.2. Testing the seating position 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 other than the driver's seat are fastened;
- (b) A load of 40 kg is applied to the seat(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 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 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 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 seat(s) in the same row as the driver's seat, for each condition (a) to (d).

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(s) in the same row as the driver's seat may be used for any rear seating position instead."

Paragraph 3., amend to read:

- "3. The first level warning test shall have a duration of at least the minimum required time as specified in paragraph 8.4.2.3. of this Regulation for the first level warning. The second level warning test may be initiated after completion of the first level warning test. However, it shall also be ensured that the second level warning supersedes the first level warning when the first level warning is still active."
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