

Proposal for amendments to ECE/TRANS/GRSG/2010/10/Rev.1 Regulation No. 43 (Safety glazing)

The intention of this informal document is to correct ECE/TRANS/GRSG/2010/10/Rev.1 from CLEPA transposing global technical regulation No. 6 into Regulation No. 43. In addition, new amendments to Regulation No. 43 are proposed in order to keep the consistency in the Regulation.

The modifications to the official document ECE/TRANS/GRSG/2010/10/Rev.1 and to the existing text of the Regulation are marked in bold for new and strikethrough for deleted characters.

A. Proposal

I. Amendments to ECE/TRANS/GRSG/2010/10/Rev.1

Paragraph 2.2., amend to read:

“2.2. **“Laminated-glass”** means ~~a glass pane~~ **glazing** consisting of two or more layers of glass held together by one or more interlayers of plastics material; it may be.”*

Paragraph 2.2.3., renumber as paragraph 2.3.

Paragraph 2.3. (former), renumber as paragraph 2.4. and amend to read:

“2.4. **“Safety-glass faced with plastics material”** means ~~a glass pane~~ **glazing** as defined in paragraphs 2.1. or 2.2. with a layer of plastics material on its inner face.”*

Paragraphs 2.4. (former) to 2.7.2., renumber as paragraphs 2.5. to 2.8.2.

Paragraph 2.8. (former), renumber as paragraph 2.9. and amend to read:

“2.9. **“Bullet resistant glazing” or “Bullet-proof glazing”**, means glazing constructed so as to be resistant to firearms.”

Paragraphs 2.9. (former) to 2.15., renumber as paragraphs 2.10. to 2.16.

Paragraphs 2.15.1. (former) to 2.15.1.2., renumber as paragraphs 2.17. to 2.17.2.

Insert new paragraphs 2.16.1. and 2.16.2., to read:

“2.16.1. “Flat windscreen” means a windscreen exhibiting no normal curvature resulting in a height of segment greater than 10 mm per linear meter;

2.16.2. “Curved windscreen” means a windscreen exhibiting a normal curvature resulting in a height of segment greater than 10 mm per linear meter.”

Paragraphs 2.16. (former) to 2.17.2. (former), renumber as paragraphs 2.18. to 2.19.2.

Paragraph 2.17.3., renumber as paragraph 2.20.

Paragraphs 2.18. (former) to 2.30.4., renumber as paragraphs 2.21. to 2.33.4.

Paragraph 2.30.5., renumber as paragraph 2.34.

* *Note by the secretariat:* Since the experts from CLEPA propose to distinguish between pane and windscreen, all the text of Regulation No. 43 and ECE/TRANS/GRSG/2010/10/Rev.1 need to be checked accordingly.

Paragraphs 2.31. (former) to 2.33. (former), renumber as paragraphs 2.35. to 2.37.

Annex 3

The amendment to paragraph 2.1.1.3., figure 1, should be deleted.

Paragraph 6.3.1.2., renumber as paragraph 6.3.1.1.1. and amend to read:

“**6.3.1.1.1.** ~~For below 70 per cent in the case of~~ windscreens and other glazing located in a position requisite for driving visibility ~~the luminous transmittance must not fall below 70 per cent.~~”

Paragraph 9.2.6., the table, amend to read:

“

| <i>Vehicle category</i> | <i>Zone or Test Area</i> | <i>Maximum values of optical distortion</i> |
|--|---|---|
| M ₁ and N (based on an M ₁ where the windscreen and seating positions are identical) | A - extended according to para. 9.2.2.1. | 2' of arc |
| | B - reduced according to para. 2.4. of Annex 18 | 6' of arc |
| M and N categories other than M₁ above | I | 2' of arc |
| Agricultural vehicles etc. for which it is not possible to determine zone I | I' | 2' of arc |

”

Paragraph 9.2.6.1., amend to read:

“9.2.6.1. **For vehicles of categories M and N**, no measurements shall be made... zone A or zone I.”

Paragraph 9.3.5., the table, amend to read:

“

| <i>Vehicle category</i> | <i>Zone or Test Area</i> | <i>Maximum values of the separation of the primary and secondary images</i> |
|--|---|---|
| M ₁ and N (based on an M ₁ where the windscreen and seating positions are identical) | A - extended according to para. 9.2.2.1. | 15' of arc |
| | B - reduced according to para. 2.4. of Annex 18 | 25' of arc |
| M and N categories other than M₁ above | I | 15' of arc |
| Agricultural vehicles, etc. for which it is not possible to determine zone I | I' | 15' of arc |

”

Paragraph 9.3.5.1., amend to read:

“9.3.5.1. **For vehicles of categories M and N**, no measurements shall be made... zone A or zone I.”

Annex 5

Paragraph 2.6.1.6., amend to read:

“2.6.1.6. No fragment longer than 100 mm in length shall be allowed except in the areas defined in paragraph ~~6.2.2.3.~~ **2.6.1.3. above** provided that:”

Annex 7, paragraph 3.2.1., amend to read:

“3.2.1. Test pieces can alternatively be finished products that may be supported over the apparatus described in paragraphs ~~6.3.1.~~ **2.1.1. to 2.1.1.3. of Annex 3.**”

II. New amendments proposed to Regulation No. 43

Annex 3

Paragraphs 9.2.1.1.1., amend to read:

“9.2.1.1.1. Optical deviation: ~~The angle between the true and the apparent direction of a point viewed through the safety glass pane, the magnitude of the angle being a function of the angle of incidence of the line of sight, the thickness and inclination of the glass pane, and the radius of curvature at the point of incidence as defined in paragraph 2.28. of this Regulation.~~”

Paragraph 9.2.5.2.1., amend to read:

“9.2.5.2.1. the eye-point, which is the point located ~~625 mm above the point R of the driver's seat in the vertical plane parallel to the longitudinal median plane of the vehicle for which the windscreen is intended, passing through the axis of the steering wheel. The eye point is hereunder designated ‘O’ defined in paragraph 2.32.1. of this Regulation;~~”

Annex 5

Paragraphs 2.5.2., amend to read:

“2.5.2. ~~Only one test shall be carried out at each prescribed point of impact~~ **Four panes shall be tested from each point of impact.**”

Annex 19, paragraphs 2.3. and 2.4., amend to read:

“2.3. **“H Point”**: means the pivot centre of the torso and thigh of the 3-DH machine installed in the vehicle seat in accordance with the procedure described in paragraph 3 below. The H point is located in the centre of the centre line of the device which is between the H point sight buttons on either side of the DH machine. The H point corresponds theoretically to the R point (for tolerances, see paragraph 3.2.2. below). Once determined in accordance with the procedure described in paragraph 4, the H point is considered as fixed in relation to the seat cushion structure and as moving with it when the seat is adjusted as defined in paragraph **2.33.2. of this Regulation.**

2.4. **“R Point” or “seating reference point”**: means a design point defined by the vehicle manufacturer for each seating position and established with respect to the three dimensional reference system as defined in paragraph **2.33.4 of this Regulation.**”

B. Justification

I. Amendments to ECE/TRANS/GRSG/2010/10/Rev.1

Referring to the new numbering:

Paragraphs 2.2. and 2.4.:

1. Since the experts from CLEPA propose to distinguish between pane and windscreen in paragraph 2.17., all the proposal should be consistent with that. For example, terms defined in paragraphs 2.2. and 2.4. are not only related to panes other than windscreens. All the text of Regulation need to be checked accordingly (see below).

Paragraph 2.3.:

2. “Interlayer” should be defined apart because is not a kind of “laminated-glass”.

Paragraphs 2.9.:

3. “Bullet-proof glazing” is the term used in the Scope of Regulation No. 43 (paragraph 1.).

Paragraphs 2.16.1. and 2.16.2.:

4. The definitions of “Flat windscreen” and “Curved windscreen” are deleted by the proposal prepared by the experts from CLEPA, but these terms are used in Annexes 4, 5, and 6 of the Regulation No. 43.

Paragraphs 2.17. to 2.17.2.:

5. The definition of pane should not be a subparagraph of “Group of windscreens”.

Paragraph 2.20.:

6. “Nominal thickness” should be defined apart from “type of safety glazing material”.

Paragraph 2.34.:

7. “Design seat-back angle” should not belong to “Reference points”.

Annex 3, paragraph 2.1.1.3., figure 1:

8. The figure in the current Regulation No. 43 seems clearer than the one in gtr No. 6..

Annex 3, paragraph 6.3.1.1.1.:

8. To be consistent with the current wording of paragraph 6.3.1.1. of Annex 3.

Annex 3, paragraphs 9.2.6. and 9.3.5., the tables:

9. To be consistent with the first row of the table.

Annex 3, paragraphs 9.2.6.1. and 9.3.5.1.:

10. To specify which categories must fulfill this requirement.

Annex 5, paragraphs 2.6.1.6., and annex 7, paragraph 3.2.1.:

11. 2010/10/Rev.1 refers to the paragraph of gtr No. 6, not to the corresponding paragraph of Regulation No. 43.

II. New amendments proposed to Regulation No. 43

In all the text of the Regulation:

1. Since the experts from CLEPA propose to distinguish between pane and windscreen in paragraph 2.17., all the text of the Regulation No. 43 should be revised on this issue.

Annex 3, paragraphs 9.2.1.1.1. and 9.2.5.2.1.:

2. The definitions in Annex 3 should be aligned with the ones proposed in 2010/10/Rev.1 for paragraph 2 of Regulation No. 43.

Annex 5, paragraphs 2.5.2.:

3. To clarify the number of impacts to perform at each point, which is different from the current text laid down in the current paragraph 2.5.2. of Annex 5. The proposed text comes from the gtr No. 6.

Annex 19, paragraphs 2.3. and 2.4.:

4. The definitions in Annex 19 should be aligned with the ones proposed in 2010/10/Rev.1 for paragraph 2 of Regulation No. 43.
