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Regulation No. 43 (Safety glazing)

Proposal for amendments to Regulation No. 43 (Safety glazing)

Submitted by the expert from the European Association of Automotive Suppliers *

The text reproduced below was prepared by the expert from the European Association of Automotive Suppliers (CLEPA) to define a reduced vision zone I for vehicles of categories M and N other than M_1. It is based on informal document GRSG-107-24. The modifications to the current text of Regulation No. 43 are marked in bold characters.

* In accordance with the programme of work of the Inland Transport Committee for 2012–2016 (ECE/TRANS/224, para. 94 and ECE/TRANS/2012/12, programme activity 02.4), 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.

I. Proposal

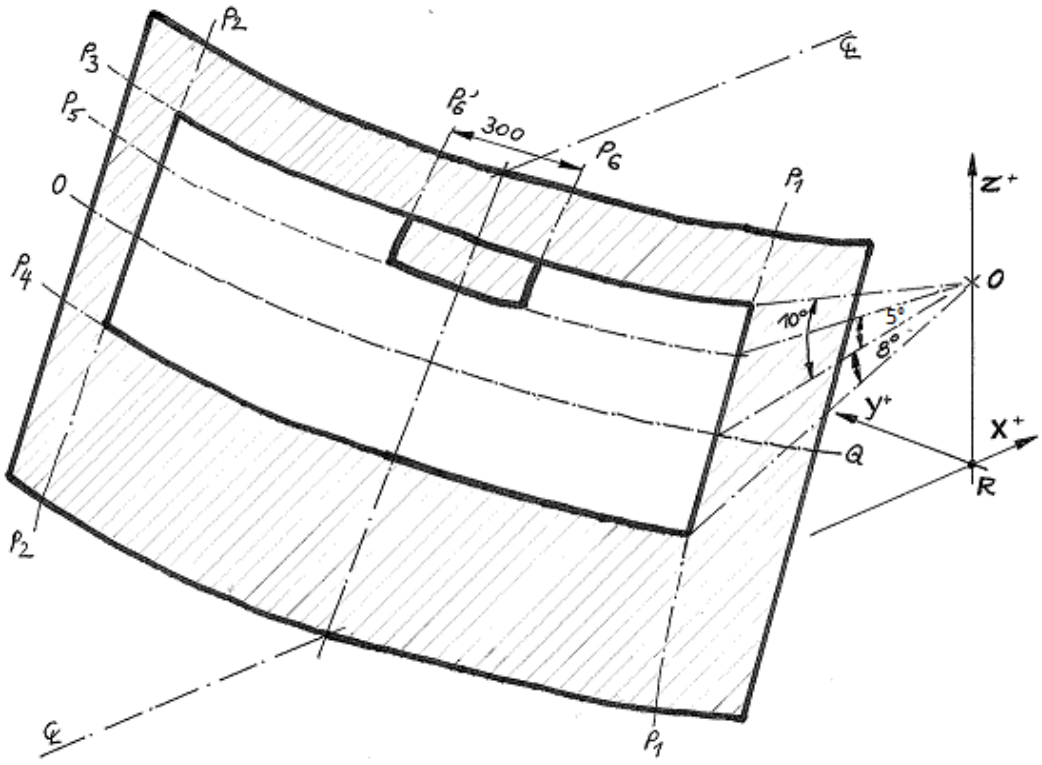
Annex 3,

Insert new paragraphs 9.2.5.3. and 9.2.5.3.1., including figure 11 and footnote [9], to read:

"**9.2.5.3.** **The reduced test area I is the test area I as defined in paragraph 9.2.5.2.3. with the exclusion of the following area (Figure 11).**

9.2.5.3.1. **Any opaque obscuration bounded downwards by plane 5, a plane passing through the straight line OQ and forming an angle of 5° above the horizontal plane and laterally by planes 6 and 6', vertical planes parallel to the longitudinal median plane of the vehicle in a distance of 150 mm to the trace of the longitudinal median plane of the vehicle (CL).** [9]

Figure 11
CL: trace of the longitudinal median plane of the vehicle
P_i : trace of the relevant plane (see text)



[9] **Measured on the outer surface of the windscreen and on the trace of plane 5. If this is not possible (in the absence of a symmetrical median longitudinal plane, for instance) P6 and P6´ shall be the planes parallel to the longitudinal plane of the vehicle passing through point 0.**"

Paragraph 9.2.5.3. (former), renumber as paragraph 9.2.5.4. and amend to read:

"9.2.5.**4.** For agricultural and forestry tractors and for construction-site vehicles for which it is not possible to determine zone I, zone I' consists in the whole **transparent** surface of the windscreen."

Paragraph 9.2.6., the table, amend to read:

"

Vehicle category	*Zone*	*Maximum values of optical distortion*
M_1 and N_1	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 M_1	I – **reduced according to para. 9.2.5.3.**	2' of arc
Agricultural vehicles etc. for which it is not possible to determine zone I	I'	2' of arc

"

Figures 11 (former) to 25 (former), renumber as Figures 12 to 26 and renumber the subsequent paragraphs references corresponding to the figures (21 times).

Paragraph 9.3.5., the table, amend to read:

"

Vehicle category	*Zone*	*Maximum values of optical distortion*
M_1 and N_1	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 M_1	I – **reduced according to para. 9.2.5.3.**	15' of arc
Agricultural vehicles etc. for which it is not possible to determine zone I	I'	15' of arc

"

II. Justification

1. Sensors and cameras, e.g. rain-light sensors, distance and lane control sensors, collision warning systems, IR-cameras etc. improving driving safety are mainly placed in the driver's field of view respectively in the wiping area of windscreens.

2. Excluded areas from the main vision zone to allow the application of these systems are well defined for M_1 vehicles and have been in place for years.

3. Depending on the R-point of the vehicle and the windscreen installation angle of M_1 vehicles, the distances between the upper edges of zone A and B (plane 1, Annex 18, paragraph 2.2. and plane 5, Annex 18, paragraph 2.3.) vary approximately from 65 to

117 mm measured on the outer surface of the windscreen. The basis for this estimation are forty M_1 vehicles, small size, middle class, upper class and suburban utility vehicles. In many cases, the area is laterally limited by a maximum of 300 mm.

4. This proposal is to define an excluded area for vehicles of categories M and N other than M_1.

5. The proposed angle of 5° (Annex 3, paragraph 9.2.5.3.1.), defining an area analogical to the above, will lead to a range of approximately 50-85 mm in the distances P3-P5 on CL (see Figure 11). The basis for this estimation are ten trucks and a bus with windscreen inclination angles of 7.2° to 31°. The area is laterally limited to 300 mm.