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World Forum for Harmonization of Vehicle Regulations

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Geneva, 11-14 November 2008
Item 4.2.16 of the provisional agenda

1958 AGREEMENT

Consideration of draft amendments to existing Regulations

Proposal for Supplement 4 to the 02 series of amendments to Regulation No. 46
(Devices for indirect vision)

Submitted by the Working Party on General Safety Provisions */

The text reproduced below was adopted by the Working Party on General Safety Provisions (GRSG) at its ninety-fourth session (ECE/TRANS/WP.29/GRSG/73, paras. 23 and 24). It is based on ECE/TRANS/WP.29/GRSG/2008/12, not amended and ECE/TRANS/WP.29/GRSG/2008/14, as amended by para. 24 of the report. It is submitted to WP.29 and AC.1 for consideration.

*/ In accordance with the programme of work of the Inland Transport Committee for 2006-2010 (ECE/TRANS/166/Add.1, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance performance of vehicles. The present document is submitted in conformity with that mandate.

Paragraphs 1.1.and 1.2., amend to read:

- "1.1. to devices for indirect vision, for vehicles of category M, N and of L₂ 1/-category vehicles with bodywork at least partly enclosing the driver,
- 1.2. to the installation of devices of indirect visions for vehicles of categories M and N and of L-category vehicles 1/ with bodywork at least partly enclosing the driver, "

Paragraph 2.1.1.13., at the end, add:

"Class VII: Mirrors intended for L category vehicles with bodywork."

Paragraph 5.4.3., amend to read:

"5.4.3. An additional symbol I or II or III or IV or V or VI or VII, specifying...."

Paragraph 6.1.1.5., amend to read:

"6.1.1.5. The device for the attachment of mirrors to the vehicle must be so designed that a cylinder with a 70 mm radius (50 mm in the case of an L-category vehicle), having ..."

Insert the following new paragraph 6.1.2.1.6.

"6.1.2.1.6. Mirrors for Category L vehicles with bodywork (Class VII)

6.1.2.1.6.1. 'Main' exterior mirrors (Class VII)

The minimum dimensions of the reflecting surface shall be such that:

- (a) Its area shall not be less than 6 900 mm²;
- (b) The diameter of circular mirrors shall not be less than 94 mm;
- (c) Where rear view mirrors are not circular, their dimensions shall enable a 78 mm-diameter circle to be prescribed on their reflecting surface.

The maximum dimensions of the reflecting surface shall be such that:

- (a) The diameter of any circular rear view mirror shall not be greater than 150 mm;
- (b) The reflecting surface of any non-circular rear view mirror shall lie within a rectangle measuring 120 mm x 200 mm."

1/ As defined in Annex 7 to the Consolidated Resolution on the Construction of Vehicles (R.E.3) (TRANS/WP.29/78/Rev.1/Amend.2 as last amended by Amend 4).

Insert the following new paragraph 6.1.2.2.4.5.

"6.1.2.2.4.5. 1.000 mm or more than 1.500 mm in the case of Class VII mirrors"

Paragraph 6.1.3.1., amend to read:

"6.1.3.1. Mirrors in Classes I to VI and Class VII (having fitments identical to Class III) shall be subjected to the tests described in paragraph 6.1.3.2.1 and 6.1.3.2.2. Class VII mirrors with a stem, shall be subjected to the tests described in paragraph 6.1.3.2.3."

Insert the following new paragraph 6.1.3.2.3.:

"6.1.3.2.3. Bending test on the protective housing attached to the stem (Class VII)

6.1.3.2.3.1. Description of test

The protective housing is placed horizontally in a device in such a way that it is possible to lock the attachment support adjusters firmly. In the direction of the largest dimension of the housing, the end closest to the point of attachment on the adjuster for the support shall be immobilized by a 15 mm-wide rigid stop covering the entire width of the housing.

At the other end, a stop identical to the one described above is placed on the housing so that the specified test load can be applied to it (Figure 2).

The end of the housing opposite to that where the force is exerted may be locked rather than held in position as shown in Figure 2.

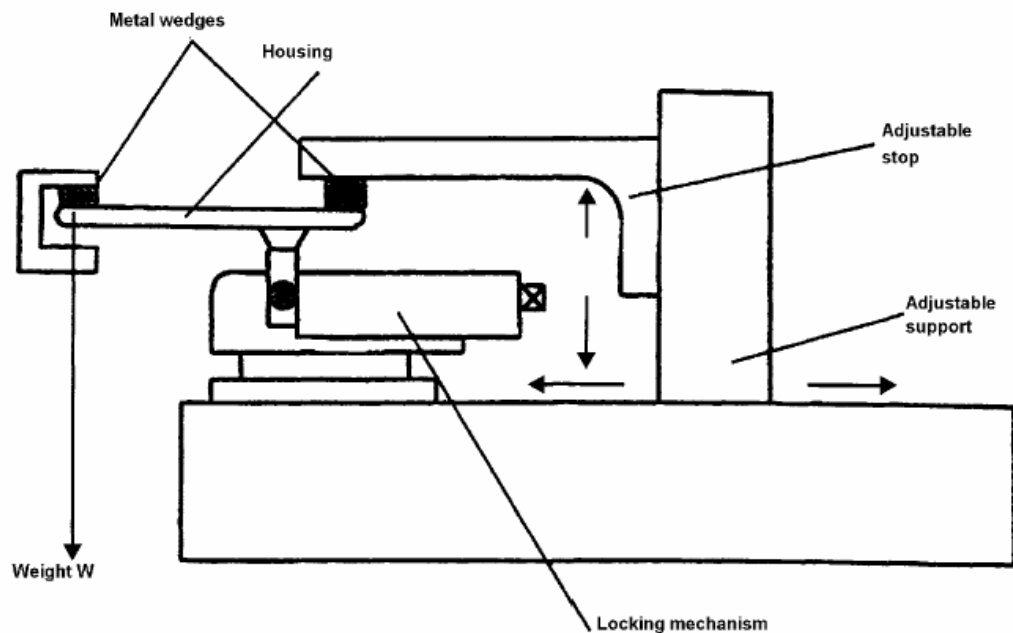


Figure 2: Example of rear view mirror bending-test rig

6.1.3.2.3.2. The test loading shall be 25 kilograms and shall be maintained for one minute."

Paragraph 12.2., replace "Figure 2" by "Figure 3" (twice)

Paragraph 12.3.3., amend to read:

"12.3.3. The coordinates of point R (where applicable);"

Paragraph 12.4., amend to read:

"12.4. "Vehicles of categories L2, L5, M1, M2, M3, N1, N2 and N3" mean those defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3), Annex 7 (document TRANS/WP.29/78/Rev.1/Amend.2).

Paragraph 15.2.1.1.2., amend to read:

"15.2.1.1.2. In case the described ... or mirrors.

In case a camera/monitor device is used, the monitor must exclusively show:

- (a) The field of vision prescribed in paragraph 15.2.4.5. when the close proximity mirror has been substituted,
- (b) The field of vision prescribed in paragraph 15.2.4.6. when the front mirror has been substituted while the vehicle is moving forward with a speed of up to 10 km/h, or
- (c) Simultaneously the fields of vision prescribed in paragraphs 15.2.4.5. and 15.2.4.6. when the close proximity mirror and the front mirror have been substituted. In the case where the vehicle is moving forward at a higher speed than 10 km/h or moving backwards, the monitor may be used for other information, provided that the field of vision prescribed in paragraph 15.2.4.5. is permanently displayed."

Paragraph 15.2.1.1.3., amend to read:

"15.2.1.1.3. Rear view mirrors required for L-category vehicles with body work

Category of vehicle	Interior mirror (Class I)	Main exterior mirror(s) (Classes III and VII)
L category motor vehicles fitted with bodywork which partly or wholly encloses the driver	1 <u>1</u> /	1, if there is an interior mirror; 2, if there is not an interior mirror
<u>1</u> / No interior rear-view mirror is required if the visibility conditions referred to in paragraph 15.2.5.4.1. below cannot be met. In this case two exterior rear-view mirrors are required, one on the left and one on the right hand side of the vehicle.		

Where a single exterior rear view mirror is fitted this shall be located on the left hand side of the vehicle in those countries where the traffic drives on the right and on the right hand side of the vehicle in those countries where the traffic drives on the left.

Insert a new paragraph 15.2.1.1.4., to read:

"15.2.1.1.4. Optional rear-view mirrors for L-category vehicles

The fitting of an exterior rear-view mirror on the side of the vehicle opposite to that of the mandatory rear-view mirror referred to in paragraph 15.2.1.1.3, is permissible. The rear-view mirror shall meet the requirements of this Regulation."

Insert a new paragraph 15.2.2.9., to read:

"15.2.2.9. All Class VII mirrors shall be attached in such a way that they remain in a stable position under normal vehicle driving conditions."

Figures 2 to 8, renumber as Figures 3 to 9

Paragraph 15.2.4.1., replace "see Figure 3" by "see Figure 4"

Paragraph 15.2.4.2.1., replace "see Figure 4" by "see Figure 5"

Paragraph 15.2.4.2.2., replace "see Figure 4" by "see Figure 5"

Paragraph 15.2.4.3.1., replace "see Figure 5" by "see Figure 6"

Paragraph 15.2.4.3.2., replace "see Figure 5" by "see Figure 6"

Paragraph 15.2.4.4.1., replace "see Figure 6" by "see Figure 7"

Paragraph 15.2.4.4.2., replace "see Figure 6" by "see Figure 7"

Paragraph 15.2.4.5., replace "see Figures 7a and 7b" by "see Figures 8a and 8b"

Paragraph 15.2.4.5.5., replace "... Figures 7a and 7b..." by "...Figures 8a and 8b..."

Paragraph 15.2.4.6.1., amend to read:

"15.2.4.6.1. The field of vision...

The front of this... (see Figure 9).

For the defined field of vision, see also paragraph 15.2.4.9.2.

The provisions...

If vehicles of these categories... defined in Figure 9. "

Insert new paragraphs 15.2.4.7. to 15.2.4.7.2, to read:

"15.2.4.7. L-category mirror (Class VII).

15.2.4.7.1. Exterior rear-view mirror on the driver's side

The field of vision must be such that the driver can see at least a 2.50 m wide, flat, horizontal portion of the road, which is bounded by a plane parallel to the median longitudinal vertical plane and passing through the outermost point of the vehicle on the driver's side of the vehicle and extends from 10 m behind the driver's ocular points to the horizon (see Figure 10).

15.2.4.7.2. Exterior rear-view mirror on the passenger's side

The field of vision must be such that the driver can see at least a 4 m wide flat, horizontal portion of the road which is bounded by a plane parallel to the median longitudinal vertical plane passing through the outermost point of the vehicle on the passenger's side and which extends from 20 m behind the driver's ocular points to the horizon (see Figure 10).

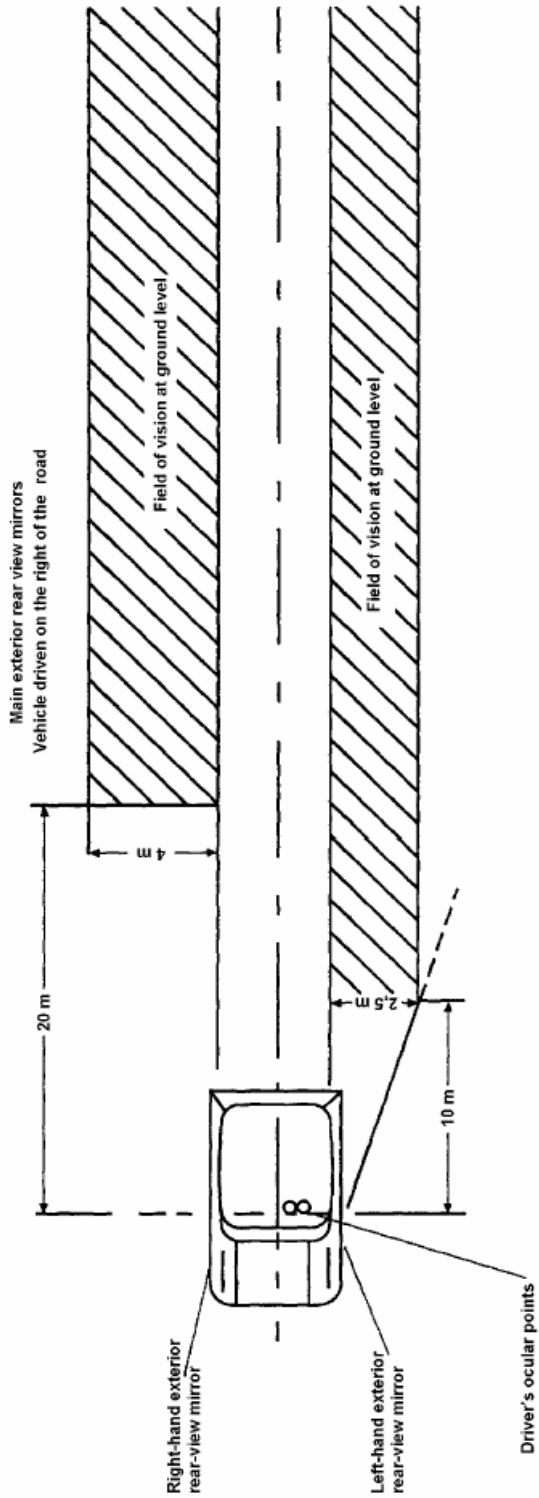


Figure 10: Field of vision of Class VII mirrors"

Paragraphs 15.2.4.7. to 15.2.4.9. (former), renumber as paragraphs 15.2.4.8. to 15.2.4.10.

Paragraphs 15.2.4.9.2. (new), first indent, amend to read:

"15.2.4.9.2. Exterior mirrors (Classes II, III, IV, V, VI and VII)"

Paragraph 15.3.5.1., replace "Figure 9" by "Figure 11"

Paragraph 15.3.5.2, Figure 9, renumber as Figure 11

Annex 4, the Appendix to the type-approval communication form, item 2, amend to read:

"... V, VI, VII, S) 2/"
