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**Economic Commission for Europe**

Inland Transport Committee

**World Forum for Harmonization of Vehicle Regulations**

Working Party on General Safety Provisions

**Ninety-ninth session**

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Item 7 of the provisional agenda

**Regulation No. 46 (Devices for indirect vision)****Proposal for amendments to Regulation No. 46****Submitted by the expert from the United Kingdom of Great Britain and Northern Ireland\***

The text reproduced below was prepared by the expert from the United Kingdom of Great Britain and Northern Ireland (United Kingdom) in order to reduce the blind spot on the passenger side of N<sub>2</sub> and N<sub>3</sub> vehicles. This document follows document ECE/TRANS/WP.29/GRSG/2010/9 submitted by the expert from the United Kingdom during the ninety-eighth session of the Working Party on General Safety Provisions. The modifications to the current text of the Regulation are marked in bold for new or strikethrough for deleted characters.

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\* 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 the performance of vehicles. The present document is submitted in conformity with that mandate.

## I. Proposal

*Insert new paragraphs 15.2.4.5.6. to 15.2.4.5.10. (including new Figures 8c, 8d and 8e), to read:*

- “15.2.4.5.6. on the passenger side only, the field of vision shall also be such that the driver can see [part of] an object 1m high and 30cm in diameter which is outside the field defined in 15.2.4.5.1. to 15.2.4.5.4. but within the field bounded by the following vertical planes (see Figures 8c and 8d):
- 15.2.4.5.7. in the transverse direction, the parallel plane passing at a distance of 4.5 m in front of the plane mentioned in paragraph 15.2.4.5.1.
- 15.2.4.5.8. to the rear, the plane parallel to the vertical plane passing through the driver's ocular points and situated at a distance of 1.75 m behind that plane.
- 15.2.4.5.9. to the front, the plane parallel to the vertical plane passing through the driver's ocular points and situated at a distance of 3 m in front of that plane. This field of vision may be partially provided by a front mirror (see figure 8e).
- 15.2.4.5.10. In cases where the described field of vision prescribed in paragraphs 15.2.4.5.6. to 15.2.4.5.9. can be obtained without the use of devices for indirect vision then, in relation to these paragraphs, the installation of such devices is not required.

Figures 8c and 8d:

**Additional field of vision at 1 m high**

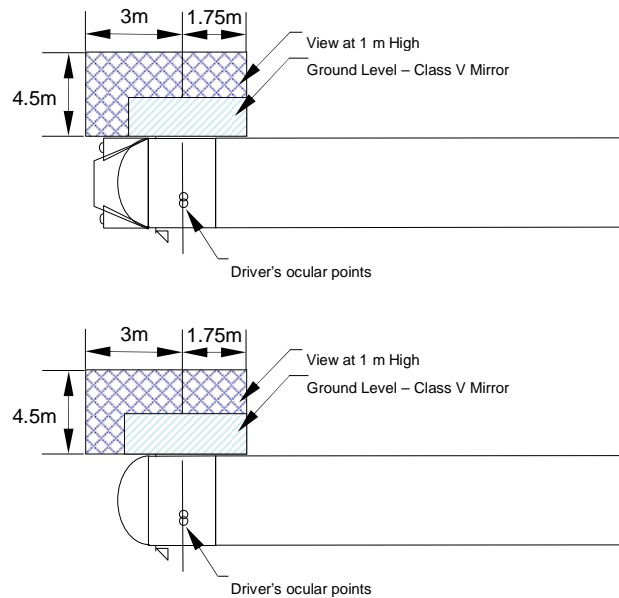
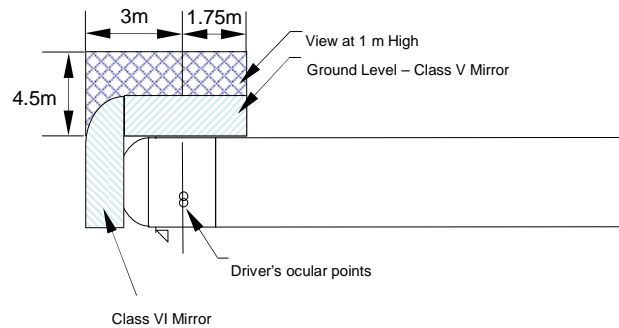


Figure 8e:  
**Class VI mirror partially covering additional field of vision at 1 m high**



Paragraphs 21.1. to 21.4., to read:

- “21.1. As from the official date of entry into force of the ~~02~~ 03 series of amendments to this Regulation, no Contracting Party applying this Regulation shall refuse an application for approval under this Regulation as amended by the ~~02~~ 03 series of amendments. \*
- ~~21.2. As from 26 January 2006, Contracting Parties applying this Regulation shall grant approvals to a type of vehicle with regard to the installation of devices for indirect vision only if the type of vehicle meets the requirements of this Regulation as amended by the 02 series of amendments. However, this date shall be postponed by 12 months as regards the requirements concerning the installation of a Class VI front mirror.~~
- 21.2. As from [12 months after entry into force of the 03 series of amendments to this regulation], Contracting Parties applying this Regulation shall grant approvals to a type of devices for indirect vision only if the type meets the requirements of this Regulation as amended by the 03 series of amendments.**
- ~~21.3. As from 26 January 2006, Contracting Parties applying this Regulation shall grant approvals to a type of devices for indirect vision only if the type meets the requirements of this Regulation as amended by the 02 series of amendment amendments. However, this date shall be postponed by 12 months with regard to the requirements concerning a Class VI front mirror as a component and its installation on vehicles.~~
- 21.3. As from [18 months after entry into force of the 03 series of amendments to this regulation], Contracting Parties applying this Regulation shall grant approvals to a type of vehicle with regard to the installation of devices for indirect vision only if the type of vehicle meets the requirements of this Regulation as amended by the 03 series of amendments.**

\* *Note by the secretariat:* Document ECE/TRANS/WP.29/GRSG/2010/21 proposes also a new 03 series of amendments. Furthermore, Document ECE/TRANS/WP.29/GRSG/2010/22 proposes a new 04 series of amendments.

- 21.4. As from ~~26 January 2010 for vehicles of category M1 and N1 and 26 January 2007 for vehicles of other categories~~ **[24 months after entry into force of the 03 series of amendments to this regulation]**, Contracting Parties applying this Regulation may refuse to recognize approvals of a type of vehicle **or type of device for** indirect vision which have not been granted in accordance with the ~~02~~ **03** series of amendments to this Regulation.”

## II. Justification

1. The United Kingdom would like to reduce the occurrence of side-swipe incidents when these large vehicles are changing lanes on motorways and to better enable the driver to see vulnerable road users when manoeuvring or turning at junctions. The alternative would be to improve the driver's direct field of vision.
2. As discussed in informal document GRSG-95-21, research in United Kingdom has shown that there is still a significant blind spot adjacent to the passenger side of the cab, despite the requirements for improved class V devices. Depending on the size of the vehicle, there is potential for a passenger car, travelling in the centre or far side of the adjacent lane, to disappear from the driver's view from 1 m behind his eye-line and not be visible again until it is in the driver's direct view 4 m in front of his eye-line. As an average small passenger car is approximately 3 m long, this blind spot provides a high risk of sides-wipe accidents occurring. It is also of significant concern that vulnerable road users such as pedestrians or cyclists can easily remain unseen in this blind spot on the passenger side of the cab.
3. By requiring the driver to have an additional field of vision on the passenger side of the vehicle, which covers an area measuring 4.75 m (long) x 4.5 m (out from the cab), this would extend fully along the front edge of the class IV device field of vision and overlap a class VI device field of vision (if fitted). This is beyond the ability of a current mirror system but is within the capabilities of an additional camera/monitor system or other devices for indirect vision (as defined in paragraph 2.1. of Regulation No. 46).