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Economic Commission for Europe**Inland Transport Committee****World Forum for Harmonization of Vehicle Regulations****Working Party on General Safety Provisions****117th session**

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Item 7(a) of the provisional agenda

Awareness of the proximity of Vulnerable Road Users**UN Regulation No. 46 (Devices for indirect vision)****Proposal for amendments to UN Regulation No. 46
(Uniform provisions concerning the approval of devices for
indirect vision and of motor vehicles with regard to the
installation of these devices)****Submitted by the expert from Germany***

The text reproduced below is prepared by the expert from Germany to amend the provisions concerning the approval of devices for indirect vision and of motor vehicles with regard to the installation of these devices. The modifications to the current text of UN Regulation No. 46 are marked in bold characters.

I. Proposal

Insert a new paragraph 16.1.1.1., to read:

“16.1.1.1. Temporary modified view

To enable an improved view in special driving situations temporary modified views different from the default view shall be permitted. The requirements laid down in paragraphs 15.2.4. (field of vision) and 16.1.3. (magnification and resolution) may not be fulfilled during temporary modified view.

* In accordance with the programme of work of the Inland Transport Committee for 2018–2019 (ECE/TRANS/274, para. 123 and ECE/TRANS/2018/21/Add.1, Cluster 3.1), the World Forum will develop, harmonize and update UN regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.



The vehicle manufacturer shall demonstrate the improvement of the view by an analysis to the satisfaction of the Technical Service and the Type Approval Authority.

The temporary modified view shall be indicated to the driver. The operator's manual shall inform the driver accordingly."

Paragraph 13.5., amend to read:

- "13.5. The CMS shall be provided by the applicant with the following documents:
- (a) Technical specification of the CMS;
 - (b) Operator's manual;
 - (c) Documentation referred to in Annex 12, paragraph 2.3.;
 - (d) **Documentation referred to in paragraph 16.1.1.1.1., if applicable."**

In Annex 2, insert a new item 12.1.2.2.9., to read:

**"12.1.2.2.9. Documentation referred to in paragraph 16.1.1.1.1., if applicable:
....."**

II. Justification

1. The temporary modified view is clearly described in ISO 16505:2015. A new point 16.1.1.1.1. "Temporary modified view" should therefore be introduced to UN Regulation No. 46.
 2. In general, there are many possibilities to improve the picture for special driving situations in comparison to conventional mirrors, by e.g. showing a bigger field of view but not fulfilling the requirements of magnification in low speed situations (like reversing).
 3. ISO 16505:2015 describes a possibility for a field of view temporary modified for special driving situations in order to compensate the static Class II field of vision using a Camera Monitoring System (CMS) – which might be a disadvantage of Camera-Monitor-Systems in special driving situations compared to conventional mirrors.
 4. When turning, in maneuvering or in other special driving situations using conventional mirrors, the driver can achieve an extended field of view by head movements, which is not provided with CMS.
 5. A changed field of view compensates the requirements for head movements especially in combination of motor vehicle and trailer. Therefore, a temporary modified field of view allows an adaption (e.g. by providing an automated panning functionality) to such special driving situations.
 6. To show the advantage of changed magnification and resolution within a combined field of view in maneuvering situations Germany will prepare a separate presentation.
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