

**Proposal for amendments to ECE/TRANS/WP.29/GRSG/2019/27**

Modification made to the text of ECE/TRANS/WP.29/GRSG/2019/27 are marked in red, bold and are underlined or strike out

**I. Proposal**

Paragraph 15.2.1.1.2., amend to read:

“15.2.1.1.2. In the case a camera-monitor system is used for rendering (the) field(s) of vision, the relevant field(s) of vision shall be permanently visible to the driver when the ignition is on or the vehicle master control switch is activated (whichever is applicable) **and not used for other information**. However, when the vehicle is moving forward at a speed above 10 km/h or backwards, the monitor or the part of the monitor intended for rendering the Class VI field of vision may be used for other information. Multiple images may be used or displayed provided that the monitor has been approved in this mode.”

Insert a new paragraph 16.1.1.1., to read:

“16.1.1.1.1. Temporarily modified view

To enable an improved view in special driving situations manoeuvre (e.g. where in ~~the~~ case of conventional mirrors the field of view is usually changed by the driver moving their head to achieve incident angle to the mirror) temporary modified views different from the default view it shall be permitted to change temporarily the field of view, so that ~~the~~ requirements laid down in paragraphs 15.2.4. (field of vision) and 16.1.3. (magnification and resolution) may not be fulfilled during this temporarily modified view.

The operation of this function shall be intuitive to the driver and not cause additional safety risks such as additional blind spots. In the case of articulated vehicles, this includes the detection an adaptation of the function modified view in such as full length of the vehicle combination. The operation of the function shall cease, when the manoeuvre has been completed and the CMS shall return to the default view.

~~The temporary modified view~~ It shall be indicated to the driver, that a temporarily modified view is displayed. At any time, the driver shall be able to deactivate the function. The operator’s manual shall inform the driver accordingly.”

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.

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:  
.....”

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## II. Justification

1. 15.2.1.1.2. was introduced to prohibit to use monitors intended to be used for rendering (the) field(s) of vision for other information. The modified text has the aim, to clarify the intention of this paragraph.

21. 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.

32. 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).

43. 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.

54. 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.

65. 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.

76. To show the advantage of changed magnification and resolution within a combined field of view in maneuvering situations Germany ~~will~~ **has** prepared **GRSG-116-37** as a separate presentation.