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AMENDMENT 1
2021-07

**Road vehicles — Ergonomic and
performance aspects of Camera
Monitor Systems — Requirements and
test procedures**

**AMENDMENT 1: ORP, FeV,
MTF10MIN(1:1)/hor, MTF10MIN(1:1)/
ver**

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*Véhicules routiers — Aspects ergonomiques et de performance des
caméras embarquées — Exigences et procédures d'essai*

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**AMENDEMENT 1: ORP, FeV, MTF10MIN(1:1)/hor, MTF10MIN(1:1)/
ver**



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This document was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 35, *Lighting and visibility*.

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Road vehicles — Ergonomic and performance aspects of Camera Monitor Systems — Requirements and test procedures

AMENDMENT 1: ORP, FeV, MTF10MIN(1:1)/hor, MTF10MIN(1:1)/ver

3.1.3, EXAMPLE

Replace the EXAMPLE with the following:

EXAMPLE “The driver’s ocular points” means two points 65 mm apart and 635 mm vertically above point *R* of the driver’s seat as defined in UN Regulation No. 46, Annex 8. The straight line joining these points runs perpendicular to the vertical longitudinal median plane of the vehicle. The centre of the segment joining the two ocular points is in a vertical longitudinal plane which has to pass through the centre of the driver’s designated seating position, as specified by the vehicle manufacturer.

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3.1.4, Figure 1

Add the word "Key" in Figure 1.

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3.1.4, EXAMPLE

Replace the EXAMPLE with the following:

EXAMPLE The two ocular points of the driver uses 635 mm vertically above point *R*, as defined in the UN Regulation No. 46, paragraph 12.1, as shown in the example given in *driver's ocular points* (3.1.3).

3.2.30, Note 2 to entry

Replace the text with the following:

Note 2 to entry FeV, which is the German driver license regulation, describes the requirements for acquiring a driver license and defines in its attachment 6 clause 1.1 a minimum visual acuity of 0,7 for driver licenses for vehicles that require class I and class III mirrors according to UN Regulation No. 46. Japan defines 0,7, Netherlands defines 0,5, and Sweden defines 0,5.

Clause 4, item MTF10_{MIN(1:1)/hor}

Replace the text with the following:

MTF10_{MIN(1:1)/hor} required minimum resolution MTF10 in the horizontal direction as defined in an assumed view size monitor with 1:1 aspect ratio (see 3.16)

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Clause 4, item $MTF10_{MIN(1:1)/ver}$

Replace the text with the following:

$MTF10_{MIN(1:1)/ver}$ required minimum resolution MTF10 in the vertical direction as defined in an assumed view size monitor with 1:1 aspect ratio (see 3.17)

6.7, third paragraph

Replace the text with the following:

- b) It should be possible to view the monitor with a gaze angle not more than 30° down from the eye point according to Reference [3] regarding the maximum angle where the monitor is allowed to be located. Please be aware of any individual mirror regulations of the national body regarding the monitor position. The monitor should be protected from ambient light or mounted accordingly. The monitor should be oriented in a way that ambient light does not illuminate the monitor from a central critical specular light direction (see also ISO 15008). The installation of the monitor should be optimized for a perpendicular viewing direction.

7.1, main paragraph

Replace the text with the following:

Verify that the necessary technical specification and operator's manual for the required tests exist.

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7.8.5, Title

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Replace the title of the clause with the following:

7.8.5 Sharpness and depth of field

B.5.2, second paragraph

Replace the text with the following:

Here are the stages of some use cases that are typical when using heavy trucks. As reference, the ordinary entrance and start-up procedure are also included. Not all of the listed stages are directly influencing the activation of a CMS. However, several of them might either be used for activation or be influencing how the system needs to be controlled.

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