

Transmitted by the expert from GTB

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Proposal for addendum to ECE/TRANS/WP.29/GRE/2009/47  
(Regulation No. 123)  
(Adaptive front-lighting systems)

During an activity to produce for GTB purposes an up-to-date consolidation of Regulation No. 123, incorporating proposals currently being considered by GRE, the following corrections have been identified. GTB considered that, whilst amendments to the Regulation as detailed in ECE/TRANS/WP.29/GRE/2009/47 are being considered, the opportunity should be taken to incorporate these additional points as explained below.

**Proposal A**

Paragraph 3.4., shall be deleted

**Justification A**

This aligns the requirements of Regulations Nos. 98 and 112. The requirement to provide an indelible outline on the lens has a severe impact upon the appearance of the lens and as, with experience, it has not been found necessary for Regulations Nos. 98 and R112 the requirement should also be removed from Regulation No. 123.

**Proposal B**

Paragraph 6.2.9.2, renumbered as paragraph 6.2.8.2., amend to read:

"6.2.8.2. **In case of the passing beam using a gas-discharge light source**, four seconds after switching on the system, which has not been operated for 30 minutes or more, at least 5 lx must be reached at point 50V of the class C passing beam;"

**Justification B**

This is a requirement that only applies to a class C passing beam using a gas-discharge light source and therefore the wording of paragraph 6.2.8.2 should make this clear.

**Proposal C**

Annex 1, add a new paragraph 9.8. to the communication form to read:

"9.8 **The adjustment of the "cut-off" has been determined at 10 m / 25 m 2/.**

**The determination of the minimum sharpness of the "cut-off" has been carried out at 10 m / 25 m 4/."**

## Justification C

This is necessary to align with the insertion of 2.7. below.

## Proposal D

Annex 8; new paragraph 2.6, correct to read:

"2.6. If, however, vertical adjustment cannot be performed repeatedly to the required position within the tolerances described in paragraph 2.5 above, the instrumental method **described in** paragraph 3. shall be applied to test compliance with the required minimum quality of the "cut-off" (**as defined in paragraph 2.7.**) and to perform the vertical and horizontal adjustment of the beam."

Annex 8, insert a new paragraph, 2.7. to read

### "2.7 MEASUREMENT OF THE QUALITY OF THE "CUT-OFF"

**To determine the minimum sharpness, measurements shall be performed by vertically scanning through the horizontal part of the "cut-off" in angular steps of 0.05° at either a measurement distance of:**

- (a) 10 m with a detector having a diameter of approximately 10 mm or
- (b) 25 m with a detector having a diameter of approximately 30 mm.

**The measuring distance at which the test was carried out shall be recorded in item 9.8 of the communication form (see Annex 1 of this Regulation).**

**To determine the maximum sharpness, measurements shall be performed by vertically scanning through the horizontal part of the "cut-off" in angular steps of 0.05° exclusively at a measurement distance of 25 m and with a detector having a diameter of approximately 30 mm.**

**The "cut-off" quality shall be considered acceptable if the requirements of paragraph 2.1. to 2.3. below comply with at least one set of measurements.**

2.1. **Not more than one "cut-off" shall be visible. \*/**

2.2. **Sharpness of "cut-off"**

**The sharpness factor G is determined by scanning vertically through the horizontal part of the "cut-off" at 2.5° from the V-V where:**

**$G = (\log E_{\beta} - \log E_{(\beta + 0.1^{\circ})})$  where  $\beta$  = the vertical position in degrees.**

**The value of G shall not be less than 0.13 (minimum sharpness) and not greater than 0.40 (maximum sharpness).**

**2.3. Linearity**

The part of the horizontal "cut-off" that serves for vertical adjustment shall be horizontal between 1.5° and 3.5° from the V-V line (see figure 1 of paragraph 3 below).

(a) The inflection points of the "cut-off" gradient at the vertical lines at 1.5°, 2.5° and 3.5° shall be determined by the equation:

$$(d^2 (\log E) / d\beta^2 = 0).$$

(b) The maximum vertical distance between the inflection points determined shall not exceed 0.2 °.

\*/ This paragraph should be amended when an objective test method is available. "

**Justification D**

This is a requirement that was omitted

**Proposal D**

Annex 9, Paragraph 2.3., correct as follows:

"2.3. In the case of a non-replaceable light source operating directly under vehicle voltage system conditions:

All measurements on lamps equipped with non-replaceable light sources (filament lamps and other) shall be made at ~~6.75 V, 6.3V~~ ~~13.5 V~~ 13.2 V or 28.0 V, or at a voltage as specified by the applicant with respect to any other vehicle voltage system. ~~The measured photometric values shall be multiplied by a factor of 0.7 prior to the check for compliance."~~

**Justification D**

To correct this paragraph in line with paragraph 2.5

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