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1958 Agreement:
Consideration of draft amendments to existing UN Regulations submitted by GRE

Proposal for Supplement 5 to the 01 series of amendments to UN Regulation No. 149 (Road Illumination Devices)

Submitted by the Working Party on Lighting and Light-Signalling*

The text reproduced below was adopted by the Working Party on Lighting and Light-Signalling (GRE) at its ninety-first session (ECE/TRANS/WP.29/GRE/91, paras. 23 and 24). It is based on ECE/TRANS/WP.29/GRE/2024/18, ECE/TRANS/WP.29/GRE/2024/19 and ECE/TRANS/WP.29/GRE/2024/22. It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Administrative Committee (AC.1) for consideration at their March 2025 sessions.

* In accordance with the programme of work of the Inland Transport Committee for 2025 as outlined in proposed programme budget for 2025 (A/79/6 (Sect. 20), table 20.6), 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.

Paragraph. 3.1.2.2., at the end add a new subparagraph (f) to read:

"3.1.2.2. …

(f) The measures provided to ensure compliance with the provisions of paragraph 4.13.1. where applicable."

Paragraph 4.11.3.2., amend to read:

"4.11.3.2. In the case of failure, it must be possible to obtain automatically a passing-beam or a state with respect to the photometric conditions which yields values not exceeding $1.30 \cdot 10^3$ cd in the Zone III b as defined in paragraph 5.3. and at least $3.40 \cdot 10^3$ cd in a point of "Zone I_{max}", by such means as e.g. switching off, dimming, aiming downwards, and/or functional substitution.

When performing the tests to verify compliance with these requirements, the Technical Service responsible for approval tests shall refer to the instructions supplied by the applicant."

Paragraphs 4.13. and 4.13.1., amend to read:

"4.13. If required by the provisions of the relevant UN Regulations Nos. 48, 53, 74 or 86 the device (lamp) shall be so made that, if a light source and/or a-light source module has failed, a signal indicating the failure is provided.

4.13.1. In case a specific function, which is realised with more than one element for visible radiation (see definition of "light source" in UN Regulation No. 48) wired so that a failure of any one of them does not cause all of them to stop emitting light, a signal indicating the failure of that specific function shall be provided, according to the applicant's selection of one or more of the following options:

(a) One or more element(s) for visible radiation stops emitting light;

(b) As a consequence of one or more element(s) for visible radiation stops emitting light, the resulting luminous intensity value in any of the photometric requirements is less than 80% of the minimum luminous intensity value required for the type approval;

(c) As a consequence of one or more element(s) for visible radiation stops emitting light, the resulting luminous flux value has changed by more than 5% compared to the luminous flux value when no failure occurs;

(d) More than 5% of the elements for visible radiation stop emitting light. In case more than one light source is used, this provision applies to the sum of all elements and to the elements of each light source separately;

(e) If fitted, one or more UN approved light source(s) stops emitting light."

Paragraph 5.3.2.5.4., amend to read:

"5.3.2.5.4. If approval is sought for a category 1 bending mode, the system is designed so that, in the case of a failure affecting the lateral movement or modification of the illumination, it must be possible to obtain automatically either photometric conditions corresponding to paragraph 5.3.2.4. or a state with respect to the photometric conditions which yields values not exceeding $1.30 \cdot 10^3$ cd in the Zone III b, as defined in Table 9, and at least $3.40 \cdot 10^3$ cd in a point of "Zone I_{max}".

However, this is not needed if, for positions relative to the system reference axis up to 5°L, at 0.3°U from H-H, and greater than 5°L, at 0.57°U, a value of $8.80 \cdot 10^2$ cd is in no case exceeded."

Table 7, footnote c, amend to read:

"c Position requirements according to the provisions of Table 8 ("Zone I_{max}")."

Table 8, amend to read:

"Table 8

Passing-beam elements angular position/extend, additional requirements (indicated for right-hand traffic)

	Beam part designation and requirement	*Angular coordinates in deg.*	
		vertical	***horizontal***
A	Angular position / extend for Zone I_{max} The maximum luminous intensity in "Zone I_{max}" as indicated in this Table shall be within the limits as prescribed in "I_{max}" in Table 7.	0.3 ° D to 1.72 ° D	0.5 ° L to 3 ° R
B	For Class C passing-beams the "cut-off" and part(s) of shall: (a) comply with the requirements of paragraph 1. of Annex 5 and		
	(b) be positioned with its "flat horizontal part" at	0.57 ° D	-

"

Table 25, amend to read:

"Table 25
Class V – Bend lighting – Category 1 – System Requirements (indicated for right-hand traffic)

Element	*Angular coordinates in deg*		*Luminous intensity in cd*					
			Column A		*Column B*		*Column C*	
			≙ 0% CoP		*≙ 20% CoP*		*≙ 30% CoP*	
	vertical	*horizontal*	*min*	*max*	*min*	*max*	*min*	*max*
BR	1°U	2.5°R	-	$1.75 \cdot 10^3$	-	$2.10 \cdot 10^3$	-	$2.28 \cdot 10^3$
Point BLL	0.57°U	8°L	-	$6.25 \cdot 10^2$	-	$8.80 \cdot 10^2$	-	$1.01 \cdot 10^3$
B50L	0.57°U	3.43°L	-	$5.30 \cdot 10^2$	-	$7.00 \cdot 10^2$	-	$7.85 \cdot 10^2$
Line III	0°	4°L to 0°	-	$8.80 \cdot 10^2$	-	$1.14 \cdot 10^3$	-	$1.26 \cdot 10^3$
50L	0.86°D	3.43°L	$1.70 \cdot 10^3$	-	$1.36 \cdot 10^3$	-	$1.19 \cdot 10^3$	-
50R	0.86°D	1.72°R	$5.10 \cdot 10^3$	$4.41 \cdot 10^4$	$4.08 \cdot 10^3$	$5.29 \cdot 10^4$	$3.57 \cdot 10^3$	$5.73 \cdot 10^4$

"

Table 26, amend to read:

"Table 26
Class V – Bend lighting – Category 2 – System Requirements (indicated for right-hand traffic)

Element	*Angular coordinates in deg*		*Luminous intensity in cd*					
			Column A		*Column B*		*Column C*	
			≙ 0% CoP		*≙ 20% CoP*		*≙ 30% CoP*	
	vertical	*horizontal*	*min*	*max*	*min*	*max*	*min*	*max*
BR	1°U	2.5°R	-	$1.75 \cdot 10^3$	-	$2.10 \cdot 10^3$	-	$2.28 \cdot 10^3$
Line BLL	0.57° U	20°L to 8°L	-	$6.25 \cdot 10^2$	-	$8.80 \cdot 10^2$	-	$1.01 \cdot 10^3$
B50L	0.57° U	3.43°L	-	$5.30 \cdot 10^2$	-	$7.00 \cdot 10^2$	-	$7.85 \cdot 10^2$
Line III	0°	4° L to 0°	-	$8.80 \cdot 10^2$	-	$1.14 \cdot 10^3$	-	$1.26 \cdot 10^3$

"

Annex 1,

Insert a new item 9.1.13., to read:

"9.1.13. Failure signal produced according to paragraph 4.13.:

No[2] Yes: (a) / (b) / (c) / (d)/ (e) [2]"

Insert a new item 9.2.14., to read:

"9.2.14. Failure signal produced according to paragraph 4.13.:

No[2] Yes: (a) / (b) / (c) / (d)/ (e) [2]"

Annex 8, paragraph. 3.7.1.2.1., amend to read:

"3.7.1.2.1. In case of classes A, B and D and AFS, after the test the results of photometric measurements carried out on the headlamp in accordance with this Regulation shall not exceed:

(a) By more than 30 per cent the maximum values prescribed at point B50L and by more than 10 per cent below the minimum values prescribed at point 75R (in the case of headlamps intended for left-hand traffic, the points to be considered are B50R and 75L)

or

(b) By more than 10 per cent below the minimum values prescribed for HV in the case of a headlamp producing driving beam only."

Annex 9, item 1.2., amend to read:

"1.2. LED module(s) shall be so designed as to be and to remain in good working order when in normal use. They shall moreover exhibit no fault in design or manufacture."