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Working Party on Lighting and Light-Signalling

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Item 7 (b) of the provisional agenda

Other UN Regulations:

UN Regulation No. 53 (Installation of lighting and light-signalling devices for L3 vehicles)

Proposal for a new 04 series of amendments to UN Regulation No. 53

Submitted by the expert from Germany*

This document is a proposal to improve road safety for motorcycles by deleting of Class A and Class BS headlamps from UN Regulation No. 53. It is based on informal document GRE-85-24 which was submitted to the eighty-fifth session of the Working Party on Lighting and Light-Signalling (GRE). The modifications are shown in bold.

* In accordance with the programme of work of the Inland Transport Committee for 2022 as outlined in proposed programme budget for 2022 (A/76/6 (Sect.20), para 20.76), 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.



I. Proposal

Paragraph 6.2.1.1., amend to read:

- "6.2.1.1. ...
- (i) Class ~~A~~, B, D, ~~BS~~, CS, DS or ES of UN Regulation No. 149;
 - (j) **Class C or V of the 01 and subsequent series of amendments to UN Regulation No. 149.**"

Paragraph 6.2.1.2., amend to read:

- "6.2.1.2. ...
- (h) Class ~~A~~, B, D, ~~BS~~, DS or ES of UN Regulation No. 149;
 - (i) **Class C or V of the 01 and subsequent series of amendments to UN Regulation No. 149.**
- Two of approved type according to:
- (~~i~~j) Class C of UN Regulation No. 113;
 - (~~j~~k) Class CS of UN Regulation No. 149."

Insert a new paragraph 11.12. to read:

- "11.12. Transitional provisions applicable to the 04 series of amendments**
- 11.12.1. As from the official date of entry into force of the 04 series of amendments, no Contracting Party applying this UN Regulation shall refuse to grant or refuse to accept UN type approvals under this UN Regulation as amended by the 04 series of amendments.**
- 11.12.2. As from [1 September 2026], Contracting Parties applying this UN Regulation shall not be obliged to accept UN type approvals to the preceding series of amendments, first issued after [1 September 2026].**
- 11.12.3. Until [1 September 2027], Contracting Parties applying this Regulation shall accept type approvals to the preceding series of amendments, first issued before [1 September 2026].**
- 11.12.4. As from [1 September 2027], Contracting Parties applying this Regulation shall not be obliged to accept type approvals issued to the preceding series of amendments to this Regulation.**
- 11.12.5. Notwithstanding the transitional provisions above, Contracting Parties who start to apply this UN Regulation after the date of entry into force of the most recent series of amendments are not obliged to accept UN type-approvals which were granted in accordance with any of the preceding series of amendments to this UN Regulation.**
- 11.12.6. Notwithstanding paragraph 11.12.2., Contracting Parties applying this UN Regulation shall continue to accept UN type approvals to the preceding series of amendments to this UN Regulation and extension thereof, for the vehicles which are not affected by the changes introduced by the 04 series of amendments.**
- 11.12.7. Contracting Parties applying this Regulation may grant type approvals according to any preceding series of amendments to this Regulation.**
- 11.12.8. Contracting Parties applying this Regulation shall continue to grant extensions of existing approvals to any preceding series of amendments to this Regulation."**

II. Justification

1. The accident rates of motorised two-wheelers are too high worldwide, especially compared to multi-track motor vehicles. Passive safety for motorbikes is essentially limited to personal protective equipment. Active safety includes steering, brakes and, among other things, lighting equipment. Motorbikes up to 125 cm³ reach top speeds from 80 km/h to over 100 km/h. For reasons of road safety, there is no reason to illuminate the road any less than for motorcycles above 125 cm³.
2. In ECE/TRANS/WP.29/GRE/2021/21, for slow-moving mopeds this issue is regulated by the following footnote: "Headlamps of Class A of UN Regulation No. 113 with LED modules or class AS of UN Regulation No. 149 with LED modules only on vehicles with a maximum design speed not exceeding 25 km/h".
3. Taking into account paras. 1 and 2 above and in order to improve road safety for motorcycles, Germany proposes to delete Class A headlamps from UN Regulation No. 53. With the same intention Germany proposes to delete Class BS headlamps for motorcycles in a Supplement to the 01 series of amendments to UN Regulation No. 53.

III. Extract from the draft 01 series of amendments to UN Regulation No. 149 (Road illumination devices) (ECE/TRANS/WP.29/GRE/2021/14)

"5.1.4. The luminous intensity distribution of the driving-beam, referring to Figures A4-II, A4-III or A4-IV, shall meet the requirements of Table 5.

The minimum performance of class A and class BS is significantly worse than class B. In many areas, not even 50% of class B is achieved.

Table 5
Type approval photometric requirements for driving-beam

Element	Angular coordinates in deg.		Minimum luminous intensity in cd					
	vertical	horizontal	Class A	Class B	Class BA (Auxiliary)	Class BS	Class CS (Secondary)	Class DS (Secondary)
2U-V	2°U	0°	1.00·10 ³	1.70·10 ³	-	-	1.00·10 ³	1.70·10 ³
H-12L	0°	12°L	6.00·10 ²	1.50·10 ³	-	-	-	-
H-9L	0°	9°L	2.00·10 ³	3.40·10 ³	-	-	-	-
H-6L	0°	6°L	3.40·10 ³	5.00·10 ³	-	2.50·10 ³	3.40·10 ³	5.00·10 ³
H-3L	0°	3°L	1.20·10 ⁴	1.75·10 ⁴	-	9.00·10 ³	1.20·10 ⁴	1.75·10 ⁴
H-V ^a	0°	0°	0.8×I _{max}	0.8×I _{max}	0.8×I _{max}	1.60·10 ⁴	2.00·10 ⁴	3.00·10 ⁴
H-3R	0°	3°R	1.20·10 ⁴	1.75·10 ⁴	-	9.00·10 ³	1.20·10 ⁴	1.75·10 ⁴
H-6R	0°	6°R	3.40·10 ³	5.00·10 ³	-	2.50·10 ³	3.40·10 ³	5.00·10 ³
H-9R	0°	9°R	2.00·10 ³	3.40·10 ³	-	-	-	-
H-12R	0°	12°R	6.00·10 ²	1.50·10 ³	-	-	-	-
I _{max}	-	-	2.70·10 ⁴	4.00·10 ⁴	1.00·10 ⁴	2.00·10 ⁴	2.70·10 ⁴	4.00·10 ⁴

Notes: In the Table 5

- ^a In case of a matched pair, the contribution of each lamp on H-V point shall not be less than 40 per cent of the relevant beam class minimum I_{max} required."