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Economic Commission for Europe**Inland Transport Committee****World Forum for Harmonization of Vehicle Regulations****Working Party on Lighting and Light-Signalling****Eightieth session**

Geneva, 23-26 October 2018

Items 4 and 7 (b) of the provisional agenda

Simplification of lighting and light-signalling UN Regulations**Other UN Regulations: UN Regulation No. 53 (Installation of lighting and light-signalling devices for L₃ vehicles)****Proposal for the 03 series of amendments to UN Regulation No. 53 and proposal for amendments to the draft new UN Regulation on Light-Signalling Devices (LSD)****Submitted by the expert from the Special Interest Group for Daytime Running Lamps for L-category vehicles (DRL-L)***

The text reproduced below was prepared by the DRL-L Special Interest Group and is based on ECE/TRANS/WP.29/GRE/2016/35, ECE/TRANS/WP.29/GRE/2017/9 and ECE/TRANS/WP.29/GRE/2018/19. The proposals reflect the conclusions of the group at its ad-hoc meeting on 17 May 2017 and are in accordance with the considerations at the seventy-seventh and seventy-ninth sessions of the Working Party on Lighting and Light-Signalling (GRE) regarding a new requirement for automatic switching from the daytime running lamp (DRL) to the headlamp for L₃ category vehicles. The modifications to the text of the Regulations are marked in bold for new or strikethrough for deleted characters.

* In accordance with the programme of work of the Inland Transport Committee for 2018–2019 (ECE/TRANS/274, para. 123 and ECE/TRANS/2018/21/Add.1, cluster 3.1), 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

A. Proposal for the 03 series of amendments to UN Regulation No. 53

Paragraph 4.2., amend to read:

"4.2. An approval number shall be assigned to each type approved. Its first two digits (at present ~~04~~ **03** for the Regulation in its ~~04~~ **03** series of amendments) shall indicate the series of amendments incorporating the most recent major technical amendments made to the Regulation at the time of issue of the approval."

Paragraph 5.11.1., amend to read:

"5.11.1. If installed, the daytime running lamp shall automatically be ON when the engine is running. If the headlamp is switched ~~on~~ **ON**, the daytime running lamp shall not come ~~on~~ **ON** when the engine is running.

~~If no daytime running lamp is installed, the headlamp shall automatically be on when the engine is running.~~

5.11.1.1. If each DRL whose maximum luminous intensity exceeds 700cd as identified in Annex 1 of [LSD Regulation] is fitted on vehicle, the headlamp [(passing beam)] shall be switched ON and OFF automatically relative to the ambient light conditions (e.g. switch ON during night-time driving conditions, tunnels, etc.) according to the requirements of Annex 7.

5.11.1.2. If each DRL whose maximum luminous intensity does not exceed 700cd as identified in Annex 1 of [LSD Regulation] is fitted on vehicle, the switching ON or OFF of headlamp [(passing beam)] may be either manual or automatic. If automatic, conditions of paragraph 5.11.1.1. must be complied with. "

Insert new paragraph 5.11.2., to read:

"5.11.2. If no daytime running lamp is installed, the headlamp [(passing beam)] shall automatically be ON when the engine is running. "

Insert new paragraphs 11.7. to 11.11., to read:

"11.7. As from [the official date of entry into force of the 03 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 03 series of amendments.

11.8. As from 1 September [2023], 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 [2023].

11.9. 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.

11.10. Notwithstanding paragraph 11.8., Contracting Parties applying this UN Regulation shall continue to accept UN type-approvals to the preceding

series of amendments to this UN Regulation, first issued after 1 September [2023] and extension thereof, for the vehicles which are not affected by the changes introduced by the 03 series of amendments.

- 11.11. Contracting Parties applying this UN Regulation shall not refuse to grant UN type-approvals according to any preceding series of amendments to this UN Regulation or extensions thereof. "

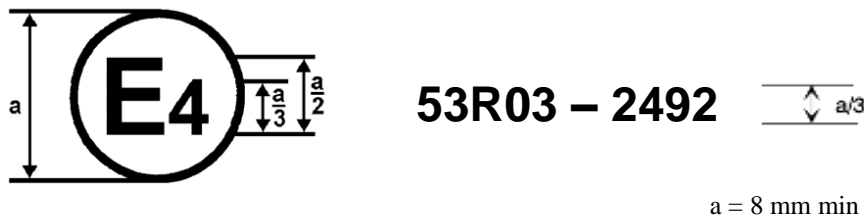
Annex 2, amend to read:

"Annex 2

Arrangement of approval marks

Model A

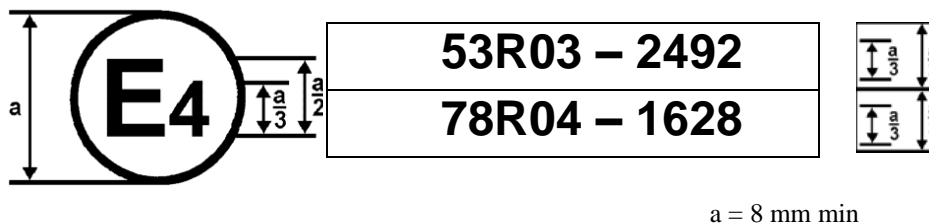
(see paragraph 4.4. of this Regulation)



The above approval mark affixed to a motorcycle shows that the vehicle type concerned has, with regard to the installation of lighting and light-signalling devices, been approved in the Netherlands (E 4), pursuant to UN Regulation No. 53, as amended by the 03 series of amendments. The approval number indicates that the approval was granted in accordance with the requirements of UN Regulation No. 53.

Model B

(see paragraph 4.5. of this Regulation)



The above approval mark affixed to a motorcycle shows that the vehicle type concerned has been approved in the Netherlands (E 4) pursuant to Regulations Nos. 53 and 78.¹ The approval numbers indicate that, at the dates when the respective approvals were granted, UN Regulation No. 53 included the 03 series of amendments and UN Regulation No. 78 already included the 04 series of amendments. "

¹ The second number is given merely as an example.

Insert a new Annex 7, to read:

"Annex 7

Ambient light related automatic switching conditions for headlamps [(passing beam)]

<i>Automatic switching conditions for headlamps [(passing beam)]¹</i>		
Ambient light outside the vehicle²	Headlamps requirement	Response time for switching
less than 1,000 lux	ON	no more than 2 seconds
1,000 lux and more than 1,000 lux	at manufacturer's discretion	at manufacturer's discretion

¹ Compliance with these conditions shall be demonstrated by the applicant, by simulation or other means of verification accepted by the Type Approval Authority.

² The illuminance shall be measured on a horizontal surface, with a cosine corrected sensor on the same height as the mounting position of the sensor on the vehicle. This may be demonstrated by the manufacturer by sufficient documentation or by other means accepted by the Type Approval Authority. "

B. Proposal for amendments to the draft new UN Regulation on Light-Signalling Devices (LSD)

Insert a new paragraph 3.5.1.1.1., to read:

"3.5.1.1.1 In the case of Daytime Running Lamp whose maximum luminous intensity does not exceed 700cd as identified in Annex 1, 700cd shall be applied as maximum luminous intensity for conformity of production procedures set forth in Annex 4. "

Annex 1, item 9., amend to read:

"...

9.1.4. A manoeuvring lamp:

The maximum mounting height:

9.1.5. A Daytime Running Lamp

Maximum luminous intensity does not exceed 700 cd: yes/no

..."

II. Justification

1. At its ad-hoc conference call meeting of 17 May 2017, the Special Interest Group for DRL-L agreed on the need to introduce requirements for automatic switching from daytime running lamps (“DRL”) to headlamp(s), if the maximum luminous intensity of DRL is above 700 cd. This value “700 cd” comes from provision of UN Regulation No. 113 which specifies maximum luminous intensity in the area of zone II.

Part A

2. The text is based on formal document ECE/TRANS/WP.29/GRE/2018/19 by the expert from the Special Interest Group for Daytime Running Lamps for L-category vehicles (DRL-L), distributed at the seventy-ninth session of GRE, with the following changes:

- (a) Introduction of requirements for automatic switching from daytime running lamps (“DRL”) to headlamp(s)/passing beam, if maximum luminous intensity of DRL is above 700 cd. Whether the maximum luminous intensity of DRL is above 700 cd or not is to be documented in the communication form set forth in Annex 1 of the [LSD UN Regulation].
- (b) Introduction of transitional provisions, as already proposed by Japan in ECE/TRANS/WP.29/GRE/2016/35 and confirmed during the ad-hoc meeting of 17 May 2017 and seventy-ninth session of GRE; see paras. 11.7. – 11.11.;
- (c) Clarification of the requirements regarding ambient light conditions, rephrasing the original proposal by Japan in ECE/TRANS/WP.29/GRE/2016/35, para. 5.11.1., but keeping its content. For reference, please note that the original proposal by Japan in ECE/TRANS/WP.29/GRE/2016/35 was the following:

"5.11.1. The headlamp shall be switched ON automatically within 2 seconds when the ambient light condition falls below 1,000 lx (e.g., under night-time driving conditions, in tunnels, etc.), after which the headlamp shall remain lit until the ambient light condition becomes not less than 1,000 lx."
- (d) It is presumed that, if there are two DRLs (category MRL) fitted, the condition of 700 cd will apply for each DRL. According to UN Regulation No. 53, two headlamps are allowed for motorcycles. Hence with two DRL, glare signature will remain the same as that of headlamps;
- (e) This proposal is linked to a correspondent proposal on the LSD Regulation.

Part B

3. The text in Part B is produced to amend LSD UN Regulation (ECE/TRANS/WP.29/GRE/2018/2) in order to introduce the following changes:

- (a) New paragraph 9.1.5. is introduced into the communication form in Annex 1 so that whether maximum luminous intensity of DRL measured at approval test is above 700 cd or not is clearly recognized.
- (b) New paragraph 3.5.1.1.1. is introduced in order to clarify that 700 cd shall be applied as maximum luminous intensity for conformity of production procedures set forth in Annex 4 if maximum luminous intensity of DRL does not exceed 700 cd.