

The text reproduced below was prepared by the special interest group of experts for DRL-L category based on the conclusions of the ad-hoc for DRL-L category meeting of 17 May 2017 and in accordance with discussions at the seventy-seven session 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. The text is based on formal document GRE-2016-35 distributed at the seventy-sixth session of GRE.

The modifications to the existing text of the Regulation are marked in **bold** for new or ~~striketrough~~ for deleted characters.

## **I. Proposals for a collective amendment to Regulation No. 53 and draft Regulation on Light Signalling Devices (LSD)**

### **A. Proposal for the 03 series of amendments to Regulation No. 53 (Installation of lighting and light-signalling devices for L3 vehicles)**

*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, the daytime running lamp shall not come ON when the engine is running.

**5.11.1.1. If RL category of each DRL is fitted on vehicle, the headlamp 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 MRL category of each DRL is fitted on vehicle, the switching ON or OFF of headlamp may be either manual or automatic. If automatic, conditions of paragraph 5.11.1.1. must be complied with.**

**5.11.2. If no daytime running lamp is installed, the headlamp 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 Regulation shall refuse to grant or refuse to accept type approvals under this Regulation as amended by the 03 series of amendments.**

**11.8. As from [48 months] after the date of entry into force of the 03 series of amendments, Contracting Parties applying this Regulation shall grant type approvals only if the vehicle type to be approved meets the requirements of this Regulation as amended by the 03 series of amendments.**

**11.9. Contracting Parties applying this Regulation shall not refuse to grant extensions of type approvals for existing types which have been granted according to the preceding series of amendments to this Regulation.**

**11.10. Even after the date of entry into force of the 03 series of amendments to this Regulation, type approvals to the preceding series of amendments to the Regulation shall remain valid. Contracting Parties applying this Regulation shall continue to accept them.**

11.11. Notwithstanding the transitional provisions above, Contracting Parties whose application of this Regulation comes into force after the date of entry into force of the 03 series of amendments are not obliged to accept type approvals which were granted in accordance with any of the preceding series of amendments to this Regulation."

Insert new Annex 7, to read:

"

**Annex 7**

**Automatic switching conditions headlamps**

Automatic switching conditions headlamps <sup>1</sup>		
Ambient light outside the vehicle <sup>2</sup>	Headlamps	Response time
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 draft Regulation on Light Signalling Devices (LSD)**

Paragraph 3.2.4., amend to read:

"3.2.4. The identification symbols to be referenced in the paragraph 9.1. of Annex 1 shall be as follows:

Table 1: Symbols

Lamp	Symbol	Paragraph
Daytime running lamp, which cannot be installed on category L3 vehicle with no automatic switching between daytime running lamp and headlamp	RL	5-4
Daytime running lamp	MRL	5-4

"

Paragraph 5.4., amend to read:

"5.4. TECHNICAL REQUIREMENTS CONCERNING DAYTIME RUNNING LAMPS (SYMBOLS RL, MRL)

5.4.1. The light emitted by each of the two lamps supplied shall meet the requirements in table 6.

Table 6: Luminous intensities for daytime running lamps

	<i>Minimum luminous intensity in H-V (values in cd)</i>	<i>Maximum luminous intensity in any direction (values in cd)</i>
Daytime running lamps RL	400	1200
<b>Daytime running lamps MRL</b>	<b>400</b>	<b>700</b>

"

Annex 2, , amend to read:

## " Annex 2

### **Light distribution in space, horizontal and vertical**

The angles shown in these arrangements are correct for lamps to be mounted on the right side of the vehicle.

Stop lamp (S1, S2)	45° / 45° 20° / 45° <sup>5</sup>	15° / 15° 15° / 5° <sup>3</sup> 5° / 15° <sup>4</sup>	
High mounted stop lamp (S3, S4)	10° / 10°	10° / 5°	-
Daytime running lamps (RL, MRL)	20° / 20°	10° / 5°	

"

## II. Justification

At the 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 maximum luminous intensity of DRL is above 700 cd.

### A.

The text is based on formal document GRE-2016-35 by Japan, distributed at the seventy-sixth session of GRE, with following changes:

- 1) Introduction of requirements for automatic switching from daytime running lamps ("DRL") to headlamp(s), if maximum luminous intensity of DRL is above 700 cd.  
In relation to this new requirement, new category of DRL with maximum luminous intensity of less than 700cd is introduced as MRL in LSD regulations.

- 2) Introduction of transitional provisions, as already proposed by Japan in GRE/2016/35 and confirmed during the ad-hoc meeting of 17 May 2017; see para. 11.7 – 11.11
- 3) Clarification of the requirements regarding ambient light condition, rephrasing the original proposal by Japan in GRE/2016/35 in para. 5.11.1, but keeping its content:  
For reference, please note that the original proposal by Japan in GRE/2016/35 was the following: “§para. 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.
- 4) It is presumed that, if there are two DRLs (category MRL) fitted, the condition of 700cd will apply for each DRL. According UNECE R53, two headlamps are allowed for motorcycles. Hence with two DRL, glare signature will remain same as that of headlamps.
- 5) This proposal is linked to a correspondent proposal concerning LSD regulation.

**B.**

- 1) It is presumed that, if there are two DRLs (category MRL) fitted, the condition of 700 cd will apply for each DRL. According to UNECE R53, two headlamps are allowed for motorcycles. Hence with two DRL, glare signature will remain same as that of headlamps.
  - 2) In addition to the proposal for amendments to UNECE R53 submitted in parallel, it is necessary to amend draft Regulation on Light Signalling Devices (LSD), in order to include new category (MRL) of DRL, which has less than 700cd as maximum intensity, in its several paragraphs and Annex 2-Light distribution in space, horizontal and vertical, to clarify that installation of new category (MRL) of daytime running lamp can be allowed without automatic switching between daytime running lamp and headlamp.
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