

**Economic and Social Council**Distr.: General
7 August 2019

Original: English

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

Geneva, 22-25 October 2019

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 Supplement to the 01 series of amendments and to the 02 series of amendments to UN Regulation No. 53****Submitted by the expert from India***

The text reproduced below is a revision of document ECE/TRANS/WP.29/GRE/2018/47 that was prepared by the experts from India and submitted to the eightieth session of GRE with the aim to make the fitment of front position lamps (FPL) optional and to incorporate suitable text for change in activation of simultaneous lamps.

This document incorporates the inputs received from GRE experts and now includes the regulatory text incorporating specific conditions under which fitment of FPL can be made optional in UN Regulation No. 53. Prior to submission of the formal document, India also submitted informal documents GRE-76-06, GRE-77-08 and GRE-78-24. This document supersedes all the informal and formal documents submitted earlier. The modifications are marked in strikethrough for deletion of text and in bold for addition of new text.

* 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

GE.19-13521(E)



* 1 9 1 3 5 2 1 *

Please recycle



I. Proposal

Paragraph 5.10., amend to read:

- “5.10. The electrical connections shall be such that the front position lamp or the passing beam headlamp, if there is no front position lamp, the rear position lamp and the rear-registration-plate illuminating device cannot be switched on or off otherwise than simultaneously unless otherwise specified. **This condition is not applicable during the time period between master control switch (ignition switch) ON and the starting of the engine.**”

Paragraph 5.14., amend to read:

- “5.14. Every vehicle submitted for approval pursuant to this Regulation shall be equipped with the following lighting and light-signalling devices:
- 5.14.1. Driving beam headlamp (paragraph 6.1.);
 - 5.14.2. Passing beam headlamp (paragraph 6.2.);
 - 5.14.3. Direction-indicator lamps (paragraph 6.3.);
 - 5.14.4. Stop lamp, S1 category device specified in Regulation No. 7 or stop lamp specified in Regulation No. 50 (paragraph 6.4).
 - 5.14.5. Rear-registration-plate illuminating device (paragraph 6.5.);
 - 5.14.6. Front position lamp (paragraph 6.6.), **also see paragraph 5.15.6.;**
 - 5.14.7. Rear position lamp (paragraph 6.7.);
 - 5.14.8. Rear retro reflector, non-triangular (paragraph 6.8.);
 - 5.14.9. Side retro reflector, non-triangular (paragraph 6.12.);”

Paragraph 5.15., amend to read:

- “5.15. It may, in addition, be equipped with the following lighting and light-signalling devices;
- 5.15.1. Vehicle-hazard warning signal (paragraph 6.9.);
 - 5.15.2. Fog lamps;
 - 5.15.2.1. Front fog lamp (paragraph 6.10.);
 - 5.15.2.2. Rear fog lamp (paragraph 6.11.);
 - 5.15.3. Daytime running lamp (paragraph 6.13.);
 - 5.15.4. Stop lamp, S3 category device specified in Regulation No. 7 (paragraph 6.4).
 - 5.15.5. Emergency stop signal (paragraph 6.14.).
 - 5.15.6. **Front position lamp (paragraph 6.6.) also see para 5.14.6.”**

Fitment of Front Position Lamp(s) is optional, if requirements indicated from (i) to (iii) as mentioned below are complied with.

- (i) **Failure of light source of one beam of headlamp does not affect the functioning of the other headlamp beam(s) or vehicle is fitted with daytime running lamp;**

- (ii) **The geometric visibility of the daytime running lamp, if fitted, and that of the passing beam meets the geometric visibility requirements prescribed for the front position lamp(s) as specified in para 6.6.4. below;**
- (iii) **The minimum photometric values of the daytime running lamp, if fitted, and that of the passing beam are in accordance to the angles of light distribution, prescribed for the geometric visibility field of front position lamp(s) as specified in Annex 4 of UN Regulation 50.**

An appropriate evidence demonstrating compliance with the requirements as indicated in (ii) and (iii) shall be provided in the test reports for daytime running lamp, if fitted, and that of passing beam, as applicable."

Paragraph 6.13.7.1., amend to read:

"6.13.7.1. The daytime running lamp shall switch OFF automatically when the headlamps are switched ON, except when the latter are used to give intermittent luminous warnings at short intervals.

The rear position lamp shall be switched ON when the daytime running lamp(s) is/are switched ON. The front position lamp(s), **if fitted**, and the rear-registration-plate illuminating device may be switched ON individually or together, when the daytime running lamp(s) is/are switched ON."

II. Justification

1. At previous sessions of GRE, India submitted few informal documents and formal document ECE/TRANSWP.29/GRE/2018/47 for the purpose of:

- Making front position lamp optional and
- Changes to electrical connections related to simultaneous activation of lamps, i.e. to permit activation of rear lamps before the front lamps are activated.

2. Based on the inputs received from experts of Contracting Parties during these GRE sessions and during bilateral discussion, India understood that the submitted proposal needed technical refinement for regulation acceptability. India is thankful to all Contracting Parties for understanding the concerns raised and for suggesting modifications for improvement. Based on the suggestions received until eighty-first session of GRE in April 2019, the formal document that was submitted in 80th GRE session is now been revised. This document covers all such changes.

3. Our earlier submitted documents have already indicated that:

- FPL is required to indicate motorcycles presence when viewed from the front,
- Light visibility from automatic headlamp ON (AHO) / daytime running lamps (DRL) is sufficient in comparison to FPL,
- Redundancy requirement in case FPL not working can be achieved through AHO / DRL.

4. A summary of the proposed changes is given in the table below.

<i>No.</i>	<i>Description</i>	<i>Changes covered by paragraph of the proposal</i>
1	<p>Proposal on change simultaneous activation of Rear Lamps.</p> <p>Motorcycle's use lighting systems working on direct current (DC) system or alternate current (AC) system or both. It is also practice to have some lamps on AC and some on DC. With prevalent use of lamps (i.e. light emitting diode (LED) type) there exist possibility that both power system are being used in motorcycle. This proposal gives freedom to apply two different electrical power sources. So, lamps working on DC system can be switched ON with ignition switch in ON position and the lamps on AC system can switch ON, when engine is started</p>	5.10.
2	<p>Relevant text is proposed for mandatory and optional fitment of front position lamps by giving appropriate cross reference.</p>	5.14.
3	<p>Specific conditions have been proposed under which fitment of front position lamps becomes optional.</p>	5.15.
a	<p>UN Regulation No. 53 prescribes different architectures for fitment of headlamp(s). If there are more than one headlamp beam (either main or passing beam), failure of one normally will not affect the operation of the other beam in such headlamp(s) or if a daytime running lamp which is fitted. For all such cases FPL is redundant</p>	5.15.6., (i) and (ii)
b	<p>Visibility angles and photometric values of DRL and/or AHO (Passing beam) if gets complied in accordance to front position lamp and if demonstrated to type approval agency /testing agency with evidence/reports can be replaced by AHO or DRL. For such cases FPL is redundant.</p>	5.15.6., (iii)
4	<p>With an understanding that FPL can be optional under certain conditions, the text has been proposed to bring in the clarity, that conditions prescribed for FPL would be applicable only when FPL is fitted</p>	6.13.7.1.