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| Proposal submitted by Italy, with the personal contribution of an SAE expert in GRE (*not balloted through SAE system*) | **GRE TF HS****1st meeting (June 02, 2017)**Document TF-HS-01-07 |

**Proposal for 07 series of amendments to Regulation No. 48**

Notes: The modifications to the current text of the regulation are marked in bold characters for new text and strikethrough characters for deleted text.

 The present proposal is based on the text or UNECE Regulation 48, 06 series of amendment, including modifications up to its [10]th supplement (document GRE-77-06-rev.1 agreed by GRE at its 77th session and sent for approval to WP.29/AC.1 - November 2017 session).

**I. Proposal:**

*[Add a new Paragraph 5.11.1.3.*, to read:

**5.11.1.3. When light signalling system operates according to paragraph 6.19.7.4.]**

*Paragraph 6.1.7.1.*, amend to read:

6.1.7.1. Except when they are used to give intermittent luminous warnings at short intervals the main-beam [headlamps] may be switched ON, only when ~~the master light switch is in headlamps ON position or in "AUTO" (automatic) position and~~ the conditions for automatic activation of dipped-beam exist **or the dipped-beam [headlamps] have been switched ON manually**. ~~In the latter case,~~ **Consequently,** the main beam [headlamps] shall be switched off automatically when the conditions for automatic activation of dipped-beam ceased to exist **or the dipped-beam [headlamps] is switched OFF manually**.

*Paragraph 6.2.7.*, amend to read:

6.2.7. Electrical connections

6.2.7.1. The control for changing over to the dipped-beam shall switch off all main-beam [headlamps] simultaneously.

6.2.7.2. The dipped-beam may remain switched on at the same time as the main beams.

6.2.7.3. In the case of dipped-beam headlamps according to Regulation No. 98, the gas-discharge light sources shall remain switched on during the main-beam operation.

6.2.7.4. One additional light source or one or more LED module(s), located inside the dipped-beam headlamps or in a lamp (except the main-beam headlamp) grouped or reciprocally incorporated with the respective dipped-beam headlamps, may be activated to produce bend lighting, provided that the horizontal radius of curvature of the trajectory of the centre of gravity of the vehicle is 500 m or less. This may be demonstrated by the manufacturer by calculation or by other means accepted by the Type Approval Authority.

~~6.2.7.5. Dipped-beam headlamps may be switched ON or OFF automatically. However, it shall be always possible to switch these dipped-beam headlamps ON and OFF manually.~~

6.2.7.**5.**~~6.~~ The dipped-beam [headlamps] 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 13.

6.2.7.**6.**~~7.~~ Without prejudice to paragraph 6.2.7.6.1., the dipped-beam [headlamps] may **be** switch**ed** ON and OFF automatically relative to other factors such as time or ambient conditions (e.g. time of the day, vehicle location, rain, fog, etc.)

**6.2.7.7. It shall be always possible to switch the dipped-beam [headlamps] ON manually.**

 **[However the automatic operation relative to the ambient light conditions according to the requirements of Annex 13 shall be reactivated automatically each time the device which starts and/or stops the engine (propulsion system), is set in a position which makes it impossible for the engine (propulsion system) to operate or is again set in a position which makes possible for the engine (propulsion system) to operate.]**

**6.2.7.8. It shall be possible to switch the dipped-beam [headlamps] OFF manually only when at least one of the following conditions exist:**

 **(a) provided that the automatic operation relative to the ambient light conditions according to the requirements of Annex 13 is reactivated at the same time;**

 **(b) the front fog lamps are switched ON.**

**6.2.7.9. The dipped-beam [headlamps] may remain OFF or, once automatically activated, may be switched OFF again manually and stay OFF despite the ambient light conditions according to the requirements of Annex 13, only for the time while at least one of the following conditions exist:**

 **(a) the automatic transmission control is in the park position;**

 **(b) the parking brake is in the applied position;**

 **(c) prior to the vehicle being set in motion for the first time after each manual activation of the propulsion system;**

 **[(d) the vehicle speed does not exceed 10 km/h.]**

 **When the dipped-beam [headlamps] are switched OFF manually in the above conditions, the lamps referred to in paragraph 5.11. shall be ON.**

**[6.2.7.10. In addition to the conditions described in paragraph 6.2.7.9. and for the purposes of fulfillig specific in-use requirments or operational use, the electrical connections of the dipped-beam [headlamps] may be such that they are switched OFF manually and stay OFF despite the ambient light conditions according to the requirements of Annex 13. In this case:**

 **(a) the dipped-beam [headlamps] manual swithcing OFF shall not be operated by means of a simple and immediate manual operation; the use of sub-menus is mandatory; and**

 **(b) the normal operative conditions prescribed in paragraphs 6.2.7.5., 6.2.7.7. and 6.2.7.8. shall be reactivated each time the device which starts and/or stops the engine (propulsion system), is set in a position which makes it impossible for the engine (propulsion system) to operate or is again set to a position which makes possible for the engine (propulsion system) to operate.**

 **When the dipped-beam [headlamps] are switched OFF manually in the above conditions, it is not required for the lamps referred to in paragraph 5.11. to be ON.]**

*Paragraph 6.19.7.*, amend to read:

6.19.7. Electrical connections

6.19.7.1. The daytime running lamps shall be switched ON automatically when:

 **(a)** the device which starts and/or stops the engine (propulsion system) is set in a position which makes it possible for the engine (propulsion system) to operate;

 **(b) the headlamps are not switched ON, manually or automatically according to the requirements of Annex 13; or**

 **(c) the front fog lamps are not switched ON.**

 However, the daytime running lamps may remain OFF **for the time** while **at least one of** the following conditions exist:

~~6.19.7.1.1.~~ **(a)** ~~T~~**t**he automatic transmission control is in the park position; ~~or~~

~~6.19.7.1.2.~~ **(b)** ~~T~~**t**he parking brake is in the applied position; ~~or~~

~~6.19.7.1.3.~~ **(c)** ~~P~~**p**rior to the vehicle being set in motion for the first time after each manual activation of the propulsion system.

6.19.7.2. The daytime running lamps may **also remain OFF** **or, once automatically activated, may** be switched OFF **again** manually when the vehicle speed does not exceed 10 km/h**,** provided they switch ON automatically when the vehicle speed exceeds 10 km/h [ ~~or when the vehicle has travelled more than 100 m] and they remain ON until deliberately switched off again~~.

6.19.7.3. The daytime running lamp shall switch OFF automatically **only** when:

 **(a)** the device which starts and/or stops the engine (propulsion system) is set in a position which makes it impossible for the engine (propulsion system) to operate; ~~or~~

 **(b)** the front fog lamps are switched ON; **or**

 **(c)** the headlamps are switched ON, except when ~~the latter~~ **they** are used to give intermittent luminous warnings at short intervals. ~~1~~

[6.19.7.4. **The rear position lamps or all** ~~T~~**t**he lamps referred to in paragraph 5.11. may be switched ON when the daytime running lamps are switched ON.]

6.19.7.5. If the distance between the front direction-indicator lamp and the daytime running lamp is equal or less than 40 mm, the electrical connections of the daytime running lamp on the relevant side of the vehicle ~~may~~ **shall** be such that either:

 (a) It is switched OFF; or

 (b) Its luminous intensity is reduced during the entire period (both ON and OFF cycle) of activation of a front direction-indicator lamp.

6.19.7.6. If a direction-indicator lamp is reciprocally incorporated with a daytime running lamp, the electrical connections of the daytime running lamp on the relevant side of the vehicle shall be such that the daytime running lamp is switched OFF during the entire period (both ON and OFF cycle) of activation of the direction-indicator lamp.

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~~1~~ ~~New vehicle types which do not comply with this provision may continue to be approved until 18 months after the entry into force of Supplement 4 to the 03 series of amendments~~

*Paragraph 6.19.7.*, amend to read:

6.22.7.3. **The passing-beam** ~~S~~**s**witching ON and OFF ~~of the passing-beam is subject to~~ **shall fulfil** the requirements for "Electrical connection" in paragraph 5.12. **and 6.2.7.** of this Regulation.

**II. Justification:**

To assure that the dipped-beam headlamps may not be switched OFF inadvertently leaving no road illumination under dark ambient light conditions, it is proposed to amend paragraph 6.2.7.5. and adding paragraphs 6.2.7.7.to 6.2.7.10. in such a way to clearly mandate the automatic switching ON of dipped-beam headlamps depending on the ambient light as a priority on the manual switching.

Renumbered paragraph 6.2.7.6. is just simplified. No changes to requirements or allowances.

New paragraph 6.2.7.7. to 6.2.7.10. were added;

- to allow temporary switching OFF of the dipped-beam headlamps under conditions that may require these lamps to be OFF. (E.g. when the vehicle engine is running and the vehicle is in a garage for repairs or is stopped by the curb for pickup or delivery; also, there may be situation in refineries or military installation when the vehicle lights have to be extinguish and the vehicle proceeds at low speed);

- to ensure that after the manual dipped beam headlamps switching OFF/ON, the condition of automatic switching is always restored.

The conditions for manual dipped-beam headlamps switching OFF are close to those set for the DRL for the similar purposes.

Requirements for DRL switching are also clarified and better connected to the amended requirements for dipped-beam switching in paragraphs 6.19.7.1. and 6.19.7.3.

There is no reason why the DRL should turn back ON when the vehicle traveling at less than 10km/h travelled more than 100m. As long as the speed remains below 10km/h the DRL may remain OFF indefinitely. Paragraph 6.19.7.2 was amended to reflect this. If there is no support for the removal of the 100 m limit; at least the sentence “until deliberately switched OFF again” should be removed. This part was creating ambiguity: some could concluded that automatic switch OFF when the engine is shut down should not deactivate DRL as it is not deliberate switching OFF of these lamps.

Footnote 1 to paragraph 6.19.7.3. is deleted, as the exemptions will not apply anymore at the time when this amendment comes into force.

In paragraph 6.19.7.4. the possibility to activate either the rear position lamps only or all the lamps of paragraph 5.11. has been added.

Paragraph 6.22.7.3. has been changed to clarify the obligation of the dipped-beam function of an AFS to fulfil the same switching requirements applicable to the non-adaptive dipped-beam.

In addition, it is suggested to delete, from various paragraphs, the word “headlamp(s)” after the words “dipped-beam” or “main-beam”; the aim of this change is to clarify that all the switching requirements refers to the functions “dipped-beam” or “main-beam” independently from the fact that these functions are performed by a specific device (headlamp) or by a multi-function device or by a part of a system.

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