

Proposal for draft amendment to Regulation No. 48
(Installation of lighting and light-signalling devices)

Daytime running lamps switching

Comments and proposals on document GRE/2009/09

A. PROPOSAL

Paragraph 5.11., amend to read:

"5.11. The electrical connections shall be such that the front and rear position lamps, the end-outline marker lamps, if they exist, the side-marker lamps, if they exist, and the rear registration plate lamp can only be switched ON and OFF simultaneously.

5.11.1. This condition does not apply:

5.11.1.1. When front and rear position lamps are switched ON, as well as side-marker lamps when combined or reciprocally incorporated with said lamps, as parking lamps; or

5.11.1.2. when side-marker lamps are permitted to flash or

{5.11.1.3. when [at least] the rear position lamps are operating in conjunction with the daytime running lamps.}"

Paragraphs 6.1.7.1. to 6.1.7.3 (former), renumber as paragraphs 6.1.7.2 to 6.1.7.4.

Insert new paragraph 6.1.7.1., to read:

~~"6.1.7.1. — The main beam headlamps may be switched ON, in a steady burning state, 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. In the later case, the main beam headlamps shall be switched off automatically when the conditions for automatic activation of dipped beam ceased to exist."~~

Paragraphs 6.1.7.1. to 6.1.7.3. (former), renumber as paragraphs 6.1.7.2 to 6.1.7.4.

Paragraph 6.1.7.1., amend to read:

"6.1.7.1. The main-beam headlamps may be switched on either simultaneously or in pairs. **They shall not be switched ON when the DRL, where present and operate according to paragraph 6.19, are switched OFF.**
In case the extra two main-beam headlamps are installed, as permitted under paragraph 6.1.2. for vehicles of the category N₃ only, no more than two pairs may be simultaneously lit.

For changing over from the dipped to the main beam at least one pair of main-beam headlamps shall be switched on. For changing over from the main-beam to the dipped-beam all main-beam headlamps shall be switched off simultaneously."

Paragraph 6.2.7., amend to read:

"6.2.7. Electrical connections

Dipped-beam headlamps may be switched ON or OFF automatically **relative to different factors such as time of the day, vehicle location or ambient conditions ([ambient illumination,] rain, fog, etc.)**. However, it shall be always possible to switch these dipped-beam headlamps ON and OFF manually.

6.2.7.1. The control for changing over to the dipped-beam shall switch off all main-beam headlamps simultaneously **or the DRL where present and operate according to paragraph 6.19, whichever are switched ON.**

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 authority responsible for type approval.

~~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."~~

Insert new paragraphs 6.2.7.6.5: to 6.2.7.8.7., to read:

"6.2.7.6.5 If daytime running lamps are present and operate according to paragraph 6.19., the dipped-beam headlamps shall be switched ON and OFF automatically relative to the ambient light conditions (e.g. switch ON during nighttime driving conditions, tunnels, etc.). ~~Without prejudice to the above, they may switch 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.)~~.

6.2.7.7.6 Paragraph 6.2.7.6.5 does not apply if ~~[*]:~~

6.2.7.7.6.1. ~~{a tell-tale is present according to paragraph 6.19.8.1., and[or]} the instrument panel is not illuminated when daytime running lamps are switched ON; or~~

~~{6.2.7.7.6.2. daytime running lamps operate in conjunction with [at least] the rear position lamps.}~~

6.2.7.8.7 If the dipped beam headlamps are switched ON and OFF automatically, relative to the ambient light conditions, this switching function shall operate according to the requirements of Annex 12.

~~["* This exemption applies to vehicles of categories M₁ and N₁ until 66 months, and for vehicles to other M and N categories until 84 months, after the official date of entry into force of the 04 series of amendment to this Regulation.]"~~

Paragraph 6.19.7.1., amend to read:

"6.19.7.1. The daytime running lamps shall be switched ON automatically when 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. However, the daytime running lamps may remain OFF while the following conditions exist:

6.19.7.1.1. the automatic transmission is in the park ~~or neutral~~ position; or

6.19.7.1.2. the parking brake is in the applied position; or

6.19.7.1.3. prior 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 be switched OFF 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.]~~

6.19.7.3.2 The daytime running lamp shall switch OFF automatically when 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 the front fog lamps or headlamps are switched ON, except when the latter are used to give intermittent luminous warnings at short intervals. 14/

6.19.7.4.3 ~~Furthermore~~ The lamps referred to in paragraph 5.11. are not switched ON when the daytime running lamps are switched ON, ~~except for~~ ~~at least~~ rear position lamps when the daytime running lamps are operating in conformance to paragraph 6.2.7.7.6.2.]"

Paragraphs 6.19.7.2. and 6.19.7.3. (former), renumber as paragraphs 6.19.7.5.4 and 6.19.7.6.5

Paragraph 6.19.8., amend to read:

"6.19.8. Tell-tale

~~6.19.8.1. Circuit-closed tell-tale~~ mandatory, if daytime running lamps operate according to paragraph 6.2.7.7.1.

~~6.19.8.1.1. Closed-circuit tell-tale activated while daytime running lamps are switched ON, or~~

~~6.19.8.1.2. Closed-circuit tell-tale -- visual or auditory or both and activated only when daytime running lamps are switched ON and conditions for automatic switching of dipped beam headlamps according to requirements of Annex 12 are satisfied.~~

6.19.8.3.2. Otherwise,] **circuit-closed** tell-tale optional."

Insert new paragraph 12.21., to read:

"12.21. As from [48] months from the official date of entry into force of Supplement 4 to the 04 series of amendments, Contracting Parties applying this Regulation shall grant approvals only if the vehicle type to be approved meets the requirements of this Regulation as amended by Supplement 4 to the 04 series of amendments."

Insert a new Annex 12, to read:

"Annex 12

AUTOMATIC SWITCHING CONDITIONS DIPPED-BEAM HEADLAMPS <u>1/</u>		
Ambient light (outside the vehicle) on a horizontal surface	Dipped-beam headlamps	Response time
less than [1000] lux	ON	fast 2/ not more than 2 seconds
between [1000] lux and 7,000 lux	at manufacturer's discretion	as applicable 2/ 3/ as for other conditions prescribed
more than 7,000 lux	OFF	slow 3/ not more than 60 seconds

1/ Compliance with these conditions shall be demonstrated by the applicant, by simulation or other means of verification accepted by the Technical Service responsible for type approval.

~~2/ This requirement shall be deemed to have been met when the dipped-beam headlamps are activated in no more than 2 seconds.~~

~~3/ This requirement shall be deemed to have been met when the dipped-beam headlamps are switched OFF in [more than 60 seconds, but] no more than 300 seconds."~~

B. JUSTIFICATION

Paragraph 5.11.1.3.

As already said, Italy consider the use of rear position lamps with DRL a good alternative to the automatic switching and consequently we delete the square bracket, confirming the introduction of such a requirement.

Paragraph 6.1.7.1

From our point of view the proposal is not clear and may be misinterpreted. It seems a specific solution for a specific technical problem where the requirements in a Regulation should not be design restrictive but applicable to all possible technical solution.

If the intention is to avoid the automatic switching ON of driving beam headlamps in the wrong moment it is sufficient that the automatic changing from DRL to headlamps shall only allow to switch ON the dipped beam headlamps.

See our alternative proposal.

Paragraph 6.2.7. and related sub-paragraphs

The proposal change a lot both the content and the structure of paragraph 6.2.7 and related sub-paragraphs.

The changes we propose are essentially the following:

- The conditions for “optional” automatic switching should be applicable in all cases and not only when the DRL are present etc; for this reason we moved both the generic allowance for automatic switching and the generic conditions directly in paragraph 6.2.7.*
- The requirements on switching from DRL to dipped beam headlamps are presently included only in paragraph 6.19.7 but nothing is said here in the requirements on dipped beam electrical connections; we deem suitable to introduce it also in paragraph 6.1.7.1.*
- In paragraph 6.2.7.6 (new numbering) we allows for two alternative solution to the automatic switching. We continue to be convinced that the automatic switching is not a necessary solution and we consider the alternative solutions on the same level of importance as the automatic switching. For this reason we want that all three alternative are considered at the same level and remain available without any limitation in time.*

Paragraphs 6.19.7.1. to 6.19.7.5.

For the electrical connections of DRL we reiterate our support to the alternative solution of DRL + at least rear position lamps; consequently we delete all the square bracket, for coherence with the modification we proposes for paragraph 6.2.7 above.

The possibility given by paragraph 6.19.7.2 above (old numbering) seems to us quite not applicable and in any case the conditions described are such that we see no advantage to allow this particular possibility; we prefer to delete the paragraph avoiding any further possibility of DRL manual switching off.

Paragraph 6.19.8. and related sub-paragraphs

As said above we deem suitable to allow for alternative solution to the DRL/HL automatic switching; one of the solution allowed is the mandatory presence of a DRL tell-tale. For this reason we deem necessary that this tell tale has only one condition of use allowed (tell-tale ON when the DRL are ON) in such a way that, associated with the instrument panel illumination OFF, a clear and uniform indication is given.

Annex 12

We do not see the reason for allowing 5 minute of time to switch from HL to DRL; we can agree on a certain delay to avoid continuous switching ON and OFF in certain condition of illumination but for these purposes a delay of 1 minute is sufficient.

Please note that, from CO2 emission point of view, 5 minutes with HL ON are much more that some hour with rear position lamps ON so why someone is so concerned with this second possibility but allows the above 5 minutes?

In addition, from editorial point of view, we deem preferable that the requirements on response time are directly in the table than in two notes.
