

March 2002

## **DGTR "Installation of lighting and light signalling devices on vehicles"**

### **Comments and proposals from Italian Expert**

In relation to the report prepared by Mr Gorzkowsky (acting as Secretary of the 3rd informal GRE Session on DGTR "Installation of lighting and light signalling devices") please take note of the following comments:

- in paragraph 2 of the report is said:

"...The informal meeting participants agreed that the GTR under discussion should reflect the highest practicable level of safety. This GTR should include the highest achievable safety requirements and the most adequate test procedures expressed in or intended for the current national and sub-national Regulations of the Contracting Parties..."

We are not in agreement with the use of words "level of safety" and "highest achievable safety requirements".

When we discussed how to consider the application of the GTRs we always speak about "level of stringency" and not "level of safety".

In particular in the field of lighting and light signalling devices, we do not agree that requirements, studied for the specific traffic characteristics of a certain geographic area and applied by many years satisfying the exigencies of this area, be considered "less safe" than others. They could be considered, by the manufacturers / users, "less stringent" if satisfying them is less costly or less complicate but this doesn't mean that the level of safety they achieve is not adequate.

I continue to consider an European dipped-beam, well aimed and well maintained, safer and more efficient than a corresponding American one for the exigencies of the European traffic. And I will continue to consider unsafe the use of red rear direction indicators and almost unuseful (and confusing) the fitting of cornering lamps or identification lamps.

So please we have to speak about "level of stringency" and to this aim we will introduce in the GTR the most stringent requirements in the present regulatory situation all around the World.

The future evolution of the GTR, if any, should be the modification of the requirements - at that moment present in the GTR - such that harmonized common requirements and related test procedures be agreed, resulting applicable in all the Countries involved without any diversification.

- In paragraph 6 is said that:

"...with the development of future GTRs describing individual lighting and light signalling devices such discretion would cease to exist. "

We agree that there will be no need for "discretionality" in the field of light signalling (and, hopefully in a near future, also in the field of lighting) since the instruments for a real common and uniform application of the requirements still exist for signalling lamps (and are almost ready to be applied for headlamps).

If we look at the long work for harmonization in this field, made firstly by GTB and whose results - for signalling lamps - were adopted many years ago by GRE, we can see that the performances required today in the ECE Regulations for signalling lamps are such that all Countries involved could recognized them as an alternative to their own requirements. Unfortunately such a recognition has not been applied by all that extra-European Countries.

To achieve a real harmonization in this field it is sufficient that the Countries not having yet adopted or recognized the existing Regulations be ready to adopt the future GTRs on lamps, easy to be prepared simply copying the technical requirements from the existing (or almost ready) ECE Regulations.

We hope that this will be the way, easy and fast, that GRE will follow for the future GTRs on lamps.

Finally please find in annex our specific comments and related justification for some of the items in the DGTR remained under discussion after the 3rd Informal GRE Session.

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**DGTR "Installation of lighting and light signalling devices on vehicles"**

Proposals for modifications and new proposals from Italian Expert

Reference document draft-Jan--2002-gre2001-06-rev1.

- 2.X **"Front"** means that part of the vehicle included between the transvers vertical plane tangent to the extreme front-end and the transvers vertical plane tangent to the rearmost edge of the seatback of the driver seat.
- 2.Y **"Rear"** means that part of the vehicle included between the transvers vertical plane tangent to the extreme rear-end and the transvers vertical plane passing through the rearmost axle.

*Introducing the two definitions above we can continue to use the present words "front" and "rear" in all the text of the Regulation.*

- 2.4. **"Overall length"** means the distance between two vertical planes perpendicular to the longitudinal median plane of the vehicle and touching the **front-end** and the **rear-end** of the vehicle respectively. All parts of the vehicle, including any parts projecting from front or rear (towing-hooks, bumpers, etc.) are contained between these two planes.

*Redactional modification in connection with the definitions in paragraphs 2.X and 2.Y.*

- 2.6 See document TRANS/WP29/GRE/2002/20 - paragraphs 2.6.1 and 2.6.2.

*These definitions should be an acceptable provisional solution, that could be confirmed or amended in relation to the GRE decisions on the above document.*

- 2.9.2 Illuminating surface of a light-signalling device other than a retro-reflector

*Comments: this definition is used by some 25 years in Europe without excessive difficulties. Why is it now deemed a "difficult enforcement item"?*

- 5.8.3 In length:  
The maximum distance between the lamp and the transverse plane which marks the forward or rearward boundary of the vehicle's overall length (**front-end** or **rear-end** of the vehicle) shall be measured from that edge of the apparent surface in the direction of the reference axis which is the closest, respectively, to the **front-end** or **rear-end** of the vehicle.

The minimum distance between two lamps which face in the same direction shall be measured between those edges of the apparent surface in the direction of the reference axis which are the closest to each other.

*Redactional modification in connection with the definitions in paragraphs 2.X and 2.Y.*

6.2.4.2. In height:

not less than 500 mm above the ground;

not more than 1200 mm above the ground.

However for very heavy-duty off-road vehicles the maximum height may be increased to 1,500 mm above the ground.

Italy reiterate his opposition to the proposal for reduction of the maximum height above the ground from 1200 mm to 950 mm for dipped-beam headlamps.

*First of all, as decided by the GRE Experts during the third Informal Session, the DGTR shall include requirements at the highest level of stringency presently in force all around the world about the fitting of lamps. We think that this philosophy shall be applied also in this case.*

*Which Country presently request a maximum limit of 950 mm from the ground for the installation of dipped-beam headlamps?*

*As far as we know there is no Country having in force this limit, the most severe requirement being 1200 mm requested by almost all the Regulations in the world, USA and CDN excepted, where a maximum height of 1372 mm is allowed.*

*For this reason Italy does'nt accepte the introduction of the proposed reduction in the DGTR under discussion.*

*Moreover, if we look at the real-life situation, we can realize that the problem of the height from the ground of the passing-beam headlamps his not so urgent to be solved.*

*In fact, the average installation height of the dipped-beam headlamps on the present production vehicles (in Europe, but we think that for Japan the figures could be smaller and even for the USA cars, normally bigger than the european ones, there should not be so great differencies) is about 780 mm for normal light-duty vehicles (slightly higher for some MPV and vans), increasing up to about 1000 mm for some off-road vehicles and rarely higher for "normal" heavy-duty vehicles.*

*On the contrary, on off-road heavy-duty vehicle (on which values up to 1500 mm are allowed, at least by the ECE Regulation) the value of 1000 mm in many cases, and sometimes also the old maximum limit of 1200 mm, is passed, but the present derogation for this category of vehicles has been confirmed.*

*Considering that, in the real life, vehicles on which the proposed limit of 950 mm is presently passed are only a small part of a minority of the total of vehicles in circulation we can easy understand that is not so necessary to impose urgently such a reduction in the maximum installation height of the dipped-beam headlamps.*

*From the above data we can clearly understand that this limitation can cause problems just to those vehicle really needing a higher positioning of the lighting and light signalling device (due to their conditions of use) without solving or reducing in appreciable way the glaring problem.*

*Moreover the research for even more aerodinamic shapes of the vehicles (joint to layout problems in the front part of small cars in particular) is a "natural" limitation for the positioning in height of the front lamps, having the same efficiency of the proposed reduced maximum height limit.*

*As a consequence, we can posponed without any problem the discussion about all the technical aspects of the question at a future GRE Session, in connection with the other, and from our point of view, more critical aspects of the glaring problem.*

6.2.7. Electrical connections

The control for changing over to the passing beam must switch off all driving beam headlamps simultaneously.

The passing beams may remain switched on at the same time as the main beams. Passing beam headlamps equipped with gas-discharge light sources shall remain switched on during the driving beam operation.

**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."**

*We deem this amendment interesting, particularly in connection with the present (national) requirements regarding the DRL function. Since there was no opposition to this specific modification, both during GRE 47 and CATP, we can introduce it immediately into DGTR even if the related document (TRANS/WP29/2002/10) probably will be returned to GRE.*

*On the contrary we do not deem urgent the other amendments to this paragraph (nor those to paragraph 6.2.9) contained in the abovesited document and related to the "bend lighting".*

6.3.7. Electrical connections

**Shall be such that:**

**6.3.7.1. the front fog lamps cannot be operate at the same time of the driving beam;**

**6.3.7.2. Either of the following applies:**

**6.3.7.3.1. the front fog lamps may continue to operate until the position lamps are switched off, and the front fog lamps shall then remain off until deliberately switched on again; or**

**6.3.7.3.2. a warning, at least audible, additional to the mandatory tell-tale (paragraph 6.3.8.) shall be given if the propulsion system is deactivated and the driver's door is opened, whilst the front fog lamp switch is in the 'on' position.**

*We deem dangerous the contemporary use of front fog lamps and driving beam headlamps when driving in fog; moreover the danger of misuse of the front fog lamps during non-fog driving is reduced by both the above requirements.*

*We do not deem necessary, on the contrary, specific requiremnts for the switching-on of the front fog lamps being sufficient the general requirements of paragraph 5.12.*

6.5.3 Arrangements

*Comments: all reference to the minimum distance between the front direction indicator lamp and the related dipped beam headlamps / front fog lamp has been deleted from this paragraph. Being not possible, at least at present, to make reference to the European class of devices we deem necessary to substitute the deleted requirement with a request of some increase in the light output of the direction indicator lamps for distances from the dipeed beam headlamps / front fog lamp less than 40 mm (measured from the edges of the apparent surfaces in the direction of the reference axis) or 100 mm (measured from the center of reference of the direction indicator lamp to the edge of the headlamp reflector / projection lens).*

6.19.4.3 In length:

*Comments: We do not deem necessary to maintain the second sentence of this paragraph ("This requirement ..... of the vehicle").*

*Since we are speaking about a signalling lamp having a luminous intensity between 400 and 800 cd (more or less the same of the most powerful direction indicator lamp in Europe and less than the corresponding device in USA) we think that there is no real need for such a requirement. Or, on the contrary, if GRE deems its presence necessary for DRL, the same requirement should be introduced for front direction indicator lamps.*

6.19.7. Electrical connections

If installed, the daytime running lamps shall be switched ON automatically each time the device, which starts and/or stops the engine, is in a position, which makes it possible for the engine to operate, unless the automatic transmission control is in the park or neutral position, the parking brake is applied, or the propulsion system is started but the vehicle was not set in motion for the first time.

**However, means shall be provided, such that the daytime running lamps can be intentionally switched off.**

The daytime running lamps 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 above proposal grants the mandatory switching-on of the DRL, as presently requested by the Canadian law; moreover the possibility of switching-off the DRL, for the purposes of conformity to requirements of Country that not allow its use, is also granted (by means of a dashbord switch, at each engine starting, or by setting or pre-setting the lighting control unit in function of the requirements of the Country in which the vehicle is sold).*

*In any case the DRL switching off is a consequence of a voluntary action (by the driver or by the manufacturer) so we deem it acceptable also in the Canadian philosophy.*

6.19.9 Other requirements

*Comments: the details regarding devices to provide daytime running light function should be included in the "Annex of level", where also information on the use of this function, allowed or not in the various Country, could be provided.*

6.20 Identifications lamps

*Comments: since requirements on the fitting of the identification lamps are introduced a DGTR for approval/certification of the separate device should be proposed.*

6.20.1 Presence

*Comments: the presence of the identification lamps is presently not allowed on vehicles registered in Italy.*

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