

D.G.T.R "Lighting and light signalling installation"

Italian comments for the 5th GRE ad hoc session

The following comments are based on document gtr4 - 2 and on the modifications to this document made during the 4th GRE informal session on D.G.T.R "Lighting and light signalling installation" (Geneva, March 29 and 30, 2004)

General comments

During last GRE Sessions (4th ad hoc and 52nd official) the GRE Chairman gave the following indications about GTRs application: *the GTRs technical requirements shall be introduced into domestic or international (UE - ECE) requirements instead of existing requirements applicable.*

In the specific case of lighting and light signalling installation - ECE Regulation no. 48 and EU Directive 97/28 - only the existing administrative (type approval procedure, markings, perhaps COP) requirements will be maintained while the technical requirements (and, we suppose, the definitions) contained in the future GTR will be introduced in place of the existing requirements; consequently the GTR, from the technical point of view, will be of mandatory application for all the contracting party to the "58 Agreement" also being contracting party, directly or indirectly, to the "98 Agreement" (for example all the EU Member States).

Looking at the "98 Agreement" we did not find any point in which the above very stringent application of a GTR is clearly stated: in other words is just matter of interpretation.

In this case we suppose that an interpretation shall be discussed and approved by the majority of the contracting Parties to become "official", in such a way to ensure a uniform application of the GTRs

Italy still deems the GTRs a set of technical requirements to allows vehicle (and parts) manufacturer to design and produce on the same basis, acceptable all over the world; GTRs shall not be automatically transformed in ECE Regulations or EU Directive.

We strongly support this view for two main reasons:

- Requirements studied and applied on a certain area taking into account the local exigencies (roads dimensions and shape, vehicles characteristics, road users behaviours, etc) cannot be simply transferred to another area or, even worst, "mixed" with different requirements and applied all over the world.

We deem that such an operation is almost impossible without a reduction in requirements efficiency and, at the end, in safety, in all the different involved areas.

- From the economic point of view to extend the mandatory application of requirements that, under some aspects, are stronger (not necessarily better) than other to all the products even in the case where parts of these products will never be sold outside the area applying less strong (not necessarily worst) requirements is clearly not an improvement for the manufacturers while the application of common requirements, even stronger than usuals one, but at the manufacturer's choice and only on the suitable products is an advantage.

As a consequence of the above points, the optional application - based on the manufacturers decision - of "harmonized" requirements in selective way is preferable in respect to the mandatory one, since reach the goal of improve the economic aspect with a minor negative impact on the safety aspect.

Comments on technical aspects

Paragraph 3.2.6, 3.2.7 and proposed 3.2.X

We deem the present definitions for tell-tales of paragraph 3.2.6. and 3.2.7 sufficient and suitable for both present and future application, in particular in connection with the draft Regulation on identification of control, tell-tales and indicators. The existing definitions are indicating the function to be performed by the tell-tales without giving, correctly, indications or requirements on the technical solution to be adopted (are not design restrictive). Since the “function” of operating tell-tale include the signalization of a failure we deem superfluous and unclear the introduction of a further definition, that could be intended as a request for a specific additional tell-tale.

Please note that in particular cases (for example stop lamps), in Regulation No. 48, the necessary indications/requirements on how the tell-tale shall work are given under the “individual specifications” (paragraphs 6.X.8); the same philosophy, where necessary, should be applied in GTR.

Consequently we do not agree on the introduction of a further definition for “failure tell-tale”.

Paragraph 3.3.17.1

For the “single lamp” a modified definition and new, more suitable requirements are under introduction into Regulation No. 48.

We deem necessary that the same definition and requirements will be introduced in this GTR, since other existing requirements on the use of “multiple compartment devices” are not sufficiently detailed and could give problems for practical application to many technical solutions already on the market.

New paragraph 3.5.19

See our comments on paragraph 4.11.2 below.

Paragraph 4.1

The wording “As installed on the vehicle,” at the beginning of this paragraph is subject to non uniform interpretations.

For this reason Italy do not agree on this wording and request to delete this paragraph. For the verification of particular aspects of the lamps installation, that the above mentioned wording should generically covers (as indicated during 4th GRE ad hoc GTR session by some Delegations), we prefer to introduce into the GTR specific requirements, where not already present, as GRE is doing in Regulation No. 48 (in particular for the voltage supply).

However we consider positively to request that the lamps fitted on the vehicle in application of this GTR comply with specific requirements applicable to the lamps as “independent technical units” and be consequently marked (see also requirements contained in paragraph 4.19); hopefully these requirements will be “harmonized” in a near future, but presently a certain incompatibility already exists among the different requirements applicable in different geographic areas.

For this reason we propose to insert in this GTR, in the more suitable location, the following wording:

“4.X In the absence of GTR(s) applicable to the characteristics and performances of the light and light signalling devices as “independent technical units”, lighting and light signalling devices described in paragraph 5. below shall conform and shall be marked in conformity with the applicable regulations of the Contracting Party(ies) in which the vehicle is intended to be registered.”

Paragraph 4.3

We are not fully in agreement with this paragraph.

The lighting devices adjustment in Europe cannot be carried out at the road side by the vehicle driver, since they need accurate verifications and the use of specific instruments. Consequently for vehicles and lighting devices approved under European regulations (or complying with future "harmonized beams requirements", if and when they will be accepted) is not possible to require that this operation be performed with ordinary tools.

Consequently we propose to stop the text of the paragraph at the end of third line (after "...by the vehicle manufacturer").

Paragraph 4.8.1, 4.8.2. and 4.8.3

The requirements of paragraph 4.8.2. shall be moved (using a suitable wording) in the specific requirements for rear end outline marker lamp (for alignment with Regulation No. 48).

The requirement of paragraph 4.8.3 are not applicable since "working lamps" are outside the scope of this GTR; to introduce a similar requirements is necessary to insert them in the specific requirements for stop lamps and made reference, for its application, to the requirements applicable in the Country in which the vehicle is intended to be registered.

Consequently paragraph 4.8.1 shall be amended deleting the first part "Except as specified in paragraphs 4.8.2. and 4.8.3...".

Paragraph 4.11.2

We agree on the simplification of paragraph 4.11.2 but we deem necessary to improve the wording to avoid misinterpretation, namely in connection with the requirements in paragraph 4.11.3.

We propose the following wording, associated to a definition of the "flash-to-pass" function:

"4.11.2 The electrical connections must be such that driving beam and passing beam headlamps and the front fog lamps cannot be switched on unless the front and rear position lamps, the side-marker lamps, the rear registration plate illuminating device and the end-outline marker lamps, if they exist, are also switched on.

This requirement shall not apply, however, to the driving or passing beams when used to perform the "flash-to-pass" function (see paragraph 3.5.19).

3.5.19 "Flash-to-pass" means the intermittent lighting up at short intervals of the driving or passing beam or the alternate lighting up at short intervals of the driving and passing beams to warn other road users that the vehicle is approaching."

Moreover we do not agree to add the derogation to the requirements of this paragraph for reduced intensity headlamps.

Paragraph 4.14

The introduction of this paragraph is useful but its application will be correct and uniform only where the "single lamp" definition and related requirements will be introduced into this GTR (see our comments on paragraph 3.3.17.1).

Paragraph 4.19

See our comments to paragraph 4.1 above.

Paragraph 4.22

During 4th ad hoc GRE session the extension of the application of this paragraph to front lighting systems (AFS and DLS) was proposed.

Italy agree on the principle but prefers to wait for the conclusion on the subject “systems failures and substituting functions” from GTB and AFS works before introduce requirements that could finally be in contrast with those of the future ECE Regulations XXX and 98, 112 and 48 amended.

Paragraph 5 “Individual specifications”

General comments:

- a) During 4th ad hoc session EU request for the reintroduction of the requirements on the presence (mandatory, optional, forbidden) of the various lighting and light signalling devices. Germany suggested, to avoid incompatibility among different local exigencies giving at the same time at least information about the different request for lamps fitting, to list the different local requirements in an Annex to this GTR not being part of the “structure” of the GTR, in such a way to update it easily without amend the whole GTR.
We deem the German proposal an acceptable and useful solution.
However we deem preferable also state at the beginning of paragraph 5 that each Contracting Party may mandate the fitting of any one of the lighting and light signalling function included in this GTR but not forbid their presence or mandate the additional fitting of lighting and light signalling function not included in this GTR on vehicle registered in its territory, except where stated in the GTR.
- b) We do not agree in general on the introduction of the paragraphs 5.X.1 “Functional purposes”; they are almost a duplication of the definitions with the addition of “requirements” that are in most cases very close to “in use requirements”. This is not acceptable for a GTR relating with the construction and not with the use of the vehicles. Consequently we propose to delete all the “Functional purposes” paragraphs.

Paragraph 5.1.3

Delete the first sentence.

Paragraph 5.1.4.1

Change to:

“5.1.4.1 In width: **E less or equal to 400 mm**”.

Paragraph 5.1.7.1

Change to:

“5.1.7.1 **In accordance with paragraph 4.11.2**”.

Paragraph 5.1.7.2

Change to:

“5.1.7.2 If there are two pairs of the driving beam headlamps they **may** be switched on **either simultaneously or** in pairs. For changing over from the passing to the driving beam **at least one** pair of driving beam headlamps shall be switched on. For changing over from the driving beam to the passing beam all driving beam headlamps shall be switched off simultaneously.”

Paragraph 5.1.7.3

Delete the whole paragraph. A similar requirement is to be introduced in paragraph 5.2.7. since it is related in particular to passing beam; we deem not necessary (and may be confusing) repeat it in this paragraph.

Paragraph 5.1.7.5

We will agree on the possibility of automatic change from passing to driving beam and vice versa only when requirements on the performances of the system to be used for this automatic change will be established and introduced into the GTR; for the time being we cannot accept the contents of paragraph 5.1.7.5 alone.

Paragraph 5.1.9.3

Change to:

"5.1.9.3. The aggregate maximum intensity of all driving beam headlamps shall conform with the requirements of **the Contracting Party(ies) in which the vehicle is intended to be registered**".

Paragraph 5.2.4.2

Change to:

"5.2.4.2. In height:
H2 more or equal to 500 mm; and
H1 less or equal to 1,200 mm."

Paragraph 5.2.6.2

Change to:

"5.2.6.2. Initial vertical and/or horizontal orientation of the passing beam cut-off and/or other characteristic of the projected pattern **shall conform with the requirements of the Contracting Party(ies) in which the vehicle is intended to be registered**".

Paragraph 5.2.6.3

Change to:

"5.2.6.3. **The vertical aiming of the passing beam cut-off shall conform with the requirements of the Contracting Party(ies) in which the vehicle is intended to be registered**".

Paragraph 5.2.7

Change to:

"5.2.7. 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 of **the** driving beams.

Passing beam headlamps equipped with gas-discharge light sources shall remain switched on during the driving beam operation.

Passing-beam headlamps may be switched ON or OFF automatically.

Each Contracting Party may require that it shall always be possible to switch the passing-beam headlamps ON and OFF manually **on vehicle intended to be registered on its territory.**"

Paragraph 5.2.9

Change to:

“5.2.9. Other provisions

The requirements of paragraph 4.6.2. shall not apply to passing beam headlamps.

Passing beam headlamp and/or its beam pattern may swivel about a substantially vertical axis according to the direction of the vehicle travel.

Passing beam headlamps with light source(s) having combined objective luminous flux, which exceeds 2,000 lumen:

- shall only be installed in conjunction with the installation of headlamp cleaning device(s). **Each Contracting Party may require that** mechanical headlamp cleaning devices (wipers) shall not be installed **in conjunction with** headlamps with plastic lenses **on vehicle intended to be registered on its territory;**

and

- **in the case where a levelling device is necessary to maintain vertical inclination of the headlamp under different vehicle loading conditions as prescribed by the Contracting Party(ies) on which territory the vehicle is intended to be registered, this levelling device shall not be manually operated.”**

Paragraph 5.3

Delete reference to “note 3” and the related text of “note 3”.

Paragraph 5.3.7.1

Change to:

“5.3.7.1 **In accordance with paragraph 4.11.2.**“

Paragraph 5.3.8

Suggestion for a change, in consideration of the future adoption of the ECE Regulation on identification of controls and tell-tales.

“5.3.8. Tell-tale

Circuit-closed tell-tale mandatory. [~~An independent non-flashing warning light.~~]”

Paragraph 5.4

Even if one or two additional reversing lamps on certain categories' vehicles are allowed to be fitted, part of the Regulation No. 48 requirements specific for this additional lamps are missed (for example the possibility to fit them on the side of the vehicles). We propose to insert them also in this GTR.

Moreover, as far as the electrical connections are concerned, we prefer to maintain the wording of the present DGTR paragraph 5.4.7.1 and not to change it with the text proposed by UK (that, in any case, contains an error); in addition we propose to change the paragraph 5.4.7.2 as follows:

“5.4.7.2 **The device(s) mentioned in paragraph 5.4.9 shall operate only when both the following conditions are fulfilled:**

- **the requirements of paragraph 5.4.7.1 above are complied with;**
- **the lamps mentioned in paragraph 4.11.1 and the headlamps (passing or driving beam) are switched on.**

The device(s) mentioned in paragraph 5.4.9 shall be automatically switched off when either the above conditions are no more fulfilled.”

Paragraph 5.5

In many points of this paragraph a reference to “note 3” is indicated, but the text of the note is not reproduced. Even if, probably, the above note is relating to the “side direction indicator lamps categories” we do not know what the text of note 3 says about this argument. Consequently, please note our comment below:

In every sub-paragraph of paragraph 5.5 it should be indicated that, “the side direction indicator lamps, in relation to the length of the vehicle on which they are installed, shall have performances according to the requirements of the Contracting Parties on which territory the vehicle is intended to be registered.”

This statement could be inserted as a note (if not already done by the text of “note 3”).

Paragraph 5.5.2

Change to:

“5.5.2. Number

Motor vehicle:

2 front direction indicator lamps

2 rear direction indicator lamps

2 side direction indicator lamps 3/

2 middle-side direction indicators 3/ on vehicles exceeding 9 m in length **intended to be registered on the territory of the Contracting Party(ies) requesting such function**

2 optional rear direction indicator lamps, **on motor vehicles other than light duty motor vehicles;**

Trailer:

2 side direction indicator lamps 3/ for trailers of 6,000 mm or more in overall length **intended to be registered on the territory of the Contracting Party(ies) requesting such function**

2 rear direction indicator lamps

2 optional rear direction indicator lamps.”

Paragraph 5.5.3.2

Change to:

“5.5.3.2. If the distance between the edge of the apparent surface in the direction of the reference axis or the optical centre of the direction indicator lamp and that of the apparent surface in the direction of the reference axis of the passing-beam headlamp and/or the front fog lamp is less than respectively 40 mm or 100 mm the photometric output of the direction indicator must be increased according to the regulation of **the Contracting Party(ies) on which territory(ies) the vehicle is intended to be registered.**”

Paragraph 5.5.4.2

We suppose something has been omitted in document gtr 4-2 for “Middle-side direction indicator lamps”:

“5.5.4.3. In length:

Front direction indicator lamps:

at the front.

Side direction indicator lamps 3/ on motor vehicles:
K less or equal to the lesser of 2,500 mm, [~~or half of the vehicle's overall length, measured from the front of the vehicle~~].

Side direction indicator lamps 3/ on trailers:
the side direction indicator lamp shall be in the middle third of the vehicle

Middle-side direction indicator lamps 3/:
?????

Rear direction indicator lamps:
at the rear."

Paragraph 5.5.5.2

Change to:

"5.5.5.2. Vertical angles:

α_1 equal to 15° (5° if H1 of the optional direction indicator lamps is more than 2,100 mm)

α_2 equal to 15° (5° if H1 is less than 750mm)

side direction indicator lamps 3/:

α_1 equal to **15°** (30° **for specific devices requested on vehicle of 6,000 mm or more in overall length, according to the regulation of the Contracting Party(ies) on which territory the vehicle is intended to be registered**)

α_2 equal to 5°"

Paragraph 5.5.7

Change to:

"5.5.7. Electrical connections

Direction indicator lamps shall switch on independently of the other lamps.

All direction indicator lamps on one side of a vehicle shall be switched on and off by means of one control and shall flash in phase.

When the direction indicator lamp is supplemented by flashing amber side-marker lamp, the amber side-marker lamp shall flash at the same frequency and in phase with the direction indicator lamp.

All direction indicator lamps may also flash simultaneously **in accordance with the requirements** on vehicle's alarm system **in force in the Contracting Party(ies) on which territory the vehicle is intended to be registered.**"

Paragraph 5.6.7

Change to:

"5.6.7. Electrical connections

The signal shall be operated by means of a separate control enabling all direction indicators and, **when the direction indicator lamp is supplemented by flashing amber side-marker lamp**, amber side marker lamps to flash in accordance with the requirements of paragraph 5.5. above."

Paragraph 5.6.9

Change to:

5.6.9. Other provisions

As specified in paragraph 5.5.9. If a power-driven vehicle is equipped to draw a trailer the hazard warning signal control shall also be capable of bringing the direction indicator and, **when the direction indicator lamp is supplemented by flashing amber side-marker lamp, amber side marker lamps** on the trailer into action.

The hazard warning signal shall be able to function even if the device which starts or stops the propulsion system of the vehicle is in a position which makes it impossible to start the propulsion system."

Paragraph 5.7.2

Change to:

"5.7.2. Number

light duty motor vehicles: 3; **however the fitting of the 3rd stop lamp should be exempted on light duty motor vehicles with open cargo space and on chassis cabs, according to the regulation of the Contracting Party(ies) on which territory the vehicle is intended to be registered.**

other motor vehicles and trailers: 2, 3 or 4 (see arrangement)"

Paragraph 5.7.3

Change to:

"5.7.3. Arrangement

All vehicles:

one pair of stop lamps

Light-duty vehicles, **except light duty vehicles with open cargo space and chassis cabs, according to the regulation of the Contracting Party(ies) on which territory the vehicle is intended to be registered** (optional on other vehicles):

in addition to the pair of stop lamps, one centre stop lamp mounted on the centreline of the vehicle.

Only, when the median longitudinal plane of the vehicle is not located on a fixed body panel but separates one or two movable parts of the vehicle (e.g. doors), and lacks sufficient space to install a single centre stop lamp on the median longitudinal plane above or below such movable parts, either:

- centre stop lamp composed of two devices may be installed, one on each movable part, or
- one centre stop lamp may be installed offset to the left or to the right of the median longitudinal plane.

In addition on other motor vehicles and trailers:

one optional pair of stop lamps may be installed if centre stop lamp is not installed."

Paragraph 5.7.7

We could accept the text proposed for this paragraph as long as it will be not in contrast with the future text of the corresponding paragraph in ECE Regulation No. 48 that will be established as a consequence of the amendment to ECE Regulations No. 13 and 13H as far as the "stop lamps activation signal" is concerned.

Paragraph 5.9.5.1

Change to:

- “5.9.5.1. Horizontal angles:
β1 equal to **80° or**
β1 equal to 45° where side marker lamps are fitted;
β2 equal to 45°
Vertical angles:
α1 equal to 15°
α2 equal to 15° (5° if H1 less than 750 mm)”

Paragraph 5.10.2

Change to:

- “5.10.2. Number
Two.
Two optional **rear position lamps, on motor vehicles other than light duty motor vehicles** (See 5.10.9).”

Paragraph 5.10.5.1

Change to:

- “5.10.5.1. Horizontal angles:
β1 equal to **80° or**
β1 equal to 45° where side marker lamps are fitted;
β2 equal to 45°
Vertical angles:
α1 equal to 15° (5° if H1 of the optional rear position lamps more 2,100 mm)
α2 equal to 15° (5° if H1 less than 750 mm)”

Paragraph 5.10.9

Change to:

- “5.10.9. Other provisions
The optional position lamps may be installed **only** in the case where end-outline marker lamps are **not** installed.”

Paragraph 5.12.9

Change to:

- “5.12.9. Other provisions
The Contracting Party(ies) may forbid the fitting of parking lamps on heavy duty vehicles intended to be registered on its(their) territory(ies).
The functioning of this lamp may also be performed by simultaneously switching on the front and rear position lamps on the same side of the vehicle.”

Paragraph 5.13.2

Change to:

- “5.13.2. Number
2 [~~or 4~~] visible from the front and
2 [~~or 4~~] visible from the rear.”

Paragraph 5.13.5

Change to:

- 5.13.5. Geometric visibility
Horizontal angles:
 β_1 equal to **80°**
Vertical angles:
 α_1 equal to 10°
 α_2 equal to 20°

Paragraph 5.13.5

Change to:

- “5.13.9. Other provisions
Provided that all other requirements are met, the lamp visible from the front and the lamp visible from the rear on the same side of the vehicle may be combined in one device.
The position of an end-outline marker lamp in relation to corresponding position lamp shall be such that the distance between the projections on a transverse vertical plane of the points nearest to one another on the apparent surfaces in the direction of the respective reference axes of the two lamps considered is not less than 200 mm.”

Paragraph 5.14.4.2

Change to:

- “5.14.4.2. In height:
H2 more or equal to **250** mm
H1 less or equal to 900 mm (1,500 mm if the shape of the bodywork makes it impossible to keep within 900 mm).”

Paragraph 5.15.4.2

Change to:

- “5.15.4.2. In height:
H2 more or equal to **250** mm
H1 less or equal to 900 mm (1,500 mm if the shape of the bodywork makes it impossible to keep within 900 mm).”

Paragraph 5.17.4.2

Change to:

- “5.17.4.2. In height:
H2 more or equal to **250** mm
H1 less or equal to 900 mm (1,500 mm if the shape of the bodywork makes it impossible to keep within 900 mm).”

Paragraph 5.18.2

Change to:

5.18.2. Number.

Light duty vehicles:

2 on each side of the vehicle. **However vehicles may be exempted from the fitting of side marker lamps according to the regulation of the Contracting Party(ies) on which territory the vehicle is intended to be registered."**

Heavy duty vehicles:

Such that the requirements for longitudinal positioning are complied with.

On chassis-cabs only the front side-marker lamps are required.

Paragraph 5.18.4.2

Change to:

5.18.4.2. In height:

H2 more or equal to **250** mm

H1 less or equal to 1,500 mm (2,100 mm if the shape of the bodywork makes it impossible to keep within 1,500 mm)

Paragraph 5.18.7

Change to:

"5.18.7. Electrical connections

In accordance with paragraph 4.11.

When the direction indicator lamp is supplemented by flashing amber side-marker lamp, the amber side-marker lamps shall flash at the same frequency and in phase with the direction indicator lamp.

The amber side-marker lamps may also flash simultaneously **in accordance with the requirements** on vehicle's alarm system **in force in the Contracting Party(ies) on which territory the vehicle is intended to be registered."**

Paragraph 5.19.4.2

Change to:

"5.19.4.2. In height:

H2 more or equal to **250** mm

H1 less or equal to **1,500** mm."

Paragraph 5.19.7

Change to:

"5.19.7. 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.

At the discretion of a Contracting Party means may be required such that the daytime running lamps can be intentionally switched OFF on vehicles intended to be registered on its territory.

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.

Lamps **indicated in paragraph 4.11.1** are permitted to operate simultaneously with the daytime running lamps."

Paragraph 5.19.7

Change to:

“5.19.8. Tell-tale

Circuit-closed tell-tale **optional**.

However **Contracting Party(ies) may request the mandatory fitting of a circuit closed tell-tale on the** vehicles not equipped with a device automatically activating all lamps required for operation of a vehicle at diminished ambient lighting condition **intended to be registered on its territory.”**

New paragraph 5.20.9

“**5.20.9 Other requirements**

Contracting Party(ies) may request that the identification lamps be “not present” on vehicles intended to be registered on its territory.”

Paragraph 5.21.9

Change to:

“5.21.9. Other provisions

5.21.9.1. The cornering lamps shall not be activated at the vehicle speed above 40 km/h.

5.21.9.2. **Contracting Party(ies) may request that the distance between the cornering lamp and front direction indicator lamp on the same side of the vehicle shall be at least [20 mm] on vehicles intended to be registered on its territory.”**

Paragraph 5.22

Delete completely or change to:

“5.22. CONSPICUITY TREATMENT

Contracting Parties may request the addition of systems of retro-reflecting devices/ materials to increase the side and rear conspicuity of certain categories of vehicles intended to be registered on its territory.”
