

Informal document No. WP.29-136-20

(136th session of WP.29, 21-24 June 2005,
agenda item 5.4. and B.2.8.)

**Status of draft gtr “Lighting and Light Signalling Devices – Installation”
- alternative provisions contained in global technical regulations (gtr).**

(Submitted by Canada)

Note: This document is a follow-up to TRANS/WP29/2005/50. It summarises an approach taken by GRE regarding areas in the draft gtr “Lighting and Light Signalling Devices – Installation” where a single requirement could not be agreed. The purpose of this document is to seek AC.3 approval for way the unresolved differences between Contracting Parties may be included in the text of a gtr presented for adoption by WP.29.

Introduction.

The goal of the 1998 Agreement is “to establish a global process by which Contracting Parties from all regions of the world can jointly develop global technical regulations...”. GRE is on track with the purpose of the agreement – the group engages in frank dialogues and searches quite successfully for the best practice to deliver a high level of safety to the driving public.

In the work on gtr “Lighting and Light Signalling Devices – Installation”, GRE has encountered several areas where the old and well-proven safety provisions of one region have clashed with different, equally well-proven provisions of another. In each case GRE has deliberated and attempted to determine which provision was more effective and more cost beneficial. Occasionally, GRE has failed to find a solution satisfying all involved parties.

At this point, the Contracting Parties faced their first alternative: (a) keep talking and delay harmonization in the area of the whole document or (b) register the successfully harmonized points and highlight the work to be continued. Majority has chosen option (b).

The items, where agreement could not be found, were identified and kept in the document as provisions for which final decision was given to each Contracting Party.

In a limited number of cases, the Contracting Parties would be free to make their individual rulings that, until a global approach is determined, will maintain an uncontrolled number of interpretations and diverse requirements or will permit them to allow leniency (e.g. allow additional devices to be installed on a vehicle registered in their territory).

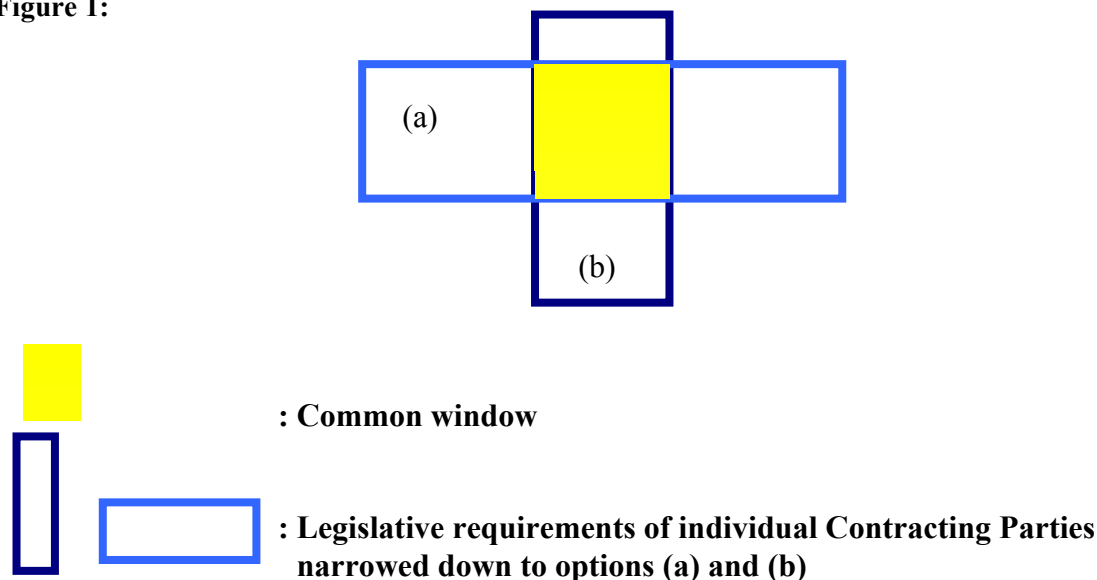
However, in most cases of disagreement, GRE was able to narrow the regional differences to two options, grouped in two columns (a) and (b). Out of these, in all but five cases it was possible to identify a common window allowing global harmony; hence, a third column “common” was created.

The question of a clear and unambiguous presentation of the options presented another alternative. The options could be presented in two columns; “common” and “alternative”. However, such phraseology would suggest that the “alternative” to a “common” practice indicates a deviation from a common=global=normal=preferred-by-majority requirement. This might be true in many cases; however, it will be misleading, if the majority prefers the “alternative” option (e.g. mandatory side marker lamps and r.r. on vehicles less than 6 m long is the “common” choice, while only two parties have it in their regs).

In the present draft of the gtr, it is suggested that three columns are displayed: “common”, “options (a)” and “option (b)”. The column “common” would display the common window while the options (a) and (b) would clearly explain the frame of the common window (see Figure 1.). Such presentation would allow Contracting Parties to choose requirements in the column “common” as preferred options in their territories or to retain their current provisions expressed by a harmonized text.

GRE seeks AC.3’s approval for such treatment of issues, which are unresolved at the present time. The options will stay in the final document as a marker identifying for the Working Party (GRE) the area of future work towards world harmonization.

Figure 1:



FOLLOWING PARAGRAPHS GIVE CONTRACTING PARTIES FREEDOM TO MAKE THEIR OWN LAWS.

4.1. Lighting and light signalling devices listed in paragraph 5. shall conform and shall be marked in conformity with the applicable regulations of the Contracting Party.

This gtr addresses placement of lighting and light signalling devices on a road vehicle, the appearance (signature) of the vehicle equipped with such devices as well as the logistics of the electrical wiring allowing these devices to function. At present time there are no gtr-s that set requirements for the specific lighting and light signalling devices. Therefore, this

gtr has to refer to regulations of the Contracting Parties to draw the manufacturers' attention to specific needs regarding intensity of photometric output, lens marking and the physical/environmental tests of lighting and light signalling devices to be placed on a vehicle meant for a specific market.

In the future reference to regulations of individual Contracting Parties will be unnecessary and this paragraph will refer to other gtrs describing lighting and light signalling devices.

4.2. Installation of lamps not listed in paragraph 5. is prohibited except on special purpose vehicles, including but not limited to, police, medical and other emergency or public service vehicles. A Contracting Party may allow the fitting of such lamps on vehicles to be registered in its territory.

This paragraph solidifies the scope of this gtr; it makes it "all-encompassing". To be a true Global Regulation, this gtr must be a comprehensive source of information regarding installation of lighting and light signalling devices. Installation of all devices required on vehicles in jurisdictions of all Contracting Parties must be described in this gtr; otherwise, if Contracting Parties would make additional devices mandatory in their jurisdictions, manufacturers would face barriers for movement of their products. Any additional allowances for lighting and light signalling devices not described in this gtr shall be decided by individual jurisdictions.

Permission for Contracting Parties to determine allowance for additional devices will have to remain until there is true world harmony in motor vehicle design and traffic signalization.

5.2.5.2. Each vehicle shall be equipped with the means to ensure that the vertical inclination of the passing beam headlamp beam pattern can be adjusted in accordance with the instructions provided with the vehicle by the vehicle manufacturer without the use of special tools other than those provided with the vehicle by the vehicle manufacturer and according to the requirements of the Contracting Party.

GRE could not agree on one concise method for initial aim and subsequent maintenance of proper aim of the passing beam headlamp. A comprehensive and clear description of the initial headlamp aim and its subsequent maintenance has to be developed.

The work in this area will continue and a common solution may be found in not distant future.

5.3.5.2. Each vehicle fitted with the front fog lamps shall be equipped with the means to ensure that the vertical inclination of the front fog lamp beam pattern can be maintained in accordance with the instructions provided with the vehicle by the vehicle manufacturer without the use of special tools other than those provided with the vehicle by the vehicle manufacturer and according to the requirements of the Contracting Party.

At present time there is no agreed method for initial aim and subsequent maintenance of proper aim of the front fog lamps. Some Contracting parties do not regulate front fog lamps and some do not have any provisions for aim of these devices.

Similarly to the passing beam headlamp, the work on the subject of front fog lamp aim will continue and a common solution might be found soon.

5.5.2.2. If the distance between the edge of the apparent surface in the direction of the reference axis of the direction indicator lamp and that of the apparent surface in the direction of the reference axis of the passing-beam headlamp, daytime running lamp and/or the front fog lamp is less than 100 mm, the photometric output of the direction indicator must be increased according to the regulation of the Contracting Party.

There is a concern regarding masking of direction indicator signal by other lighting or light signalling devices mounted in a close proximity. This concern was addressed by requirement of higher intensity of the direction indicators. One approach was to create different types of direction indicators differentiated by their intensity related to the distance from the offending device; another set just one step intensity increase. At this time GRE could not agree which approach to chose.

This item will be clarified once gtr regarding direction indicators and their types is developed.

5.22. CONSPICUITY TREATMENT

Based on a determination by each Contracting Party, specific conspicuity treatment (line marking, contour marking etc.) may be required.

At present time almost each Contracting Party requires or allows different conspicuity marking of large vehicles. The task of harmonizing all of them, during the sessions of GRE or the informal sessions developing this gtr, was too cumbersome. GRE decided to create a separate task force to work on the subject of conspicuity treatment. The results of this task force work may be soon incorporated into this gtr.

FLOWING PARAGRAPHS GIVE SPECIFIC OPTIONS TO BE CHOSEN BY CONTRACTING PARTIES.

In 23 out of 29 cases there is a common area, which, when chosen by the vehicle manufacturer, would allow the vehicle to be distributed in the territories of all Contracting Parties to the 1998 Agreement.

	COMMON	OPTION (a)	OPTION (b)
4.21.5. direction indicator lamp and hazard warning signal:	rear amber	amber or red	amber only

North American drivers are very familiar with the red coloured rear direction indicator. Forcing the industry to follow the regime of amber only could not be justified on the safety improvement basis. Other drivers are accustomed to the amber only rear direction indicator; for them introduction of red option could cause confusion leading to lowering safety level. Resolution of this option depends on the decision of the industry.

4.21.9. front position lamp:	white	white or amber	white only
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In the case of front position lamps the issue of white only front position lamp may not be that far from being resolved. However, the delay caused by prolonged discussion, may slow or temporarily stop development of this document. An alternative is offered to allow timely adoption of this gtr.

4.21.13. end-outline marker lamp: front ???????? amber white

Although this item seems to lack common ground, it is possible that white only end-outline marker will be accepted in the future. Once again time and some further internal discussions within the Contracting Parties demanding amber only end-outline marker are needed to eliminate this “option” paragraph.

4.21.16. side retro-reflector rearmost red red only amber or red

4.21.17. Side-marker lamp rearmost red red only amber or red

The solution of red only seems to be not far away. Nevertheless, some more internal discussion are needed within parties demanding amber rear side retro-reflector and rear side marker lamp. Again, at present time an alternative is offered to allow timely adoption of this gtr.

4.21.18. daytime running lamp: white amber to white white only

4.21.19. identification lamps: front ???????? amber white

Although this item (as para. 4.21.13.) seems to lack common ground, it is possible that white only identification lamps will be accepted in the future. Once again time and some further internal discussions within the Contracting Parties demanding amber only identification lamps are needed to eliminate this “option” paragraph.

	Vehicle category	Common	Option (a)	Option (b)
4.22.4. reversing lamp:	Trailers:	M	O	M
Cost benefit analysis will be needed to eliminate option (a).				
4.22.5. dir. ind. lamp and hazard warning signal:	side Motor vehicles	M	O	M
Cost benefit analysis will be needed to eliminate option (a).				
4.22.6. additional side direction indicator	Category 2 motor vehicles and trailers exceeding 8,000 kg in gross vehicle mass; except truck-tractors	M	O	M

Cost benefit analysis will be needed to eliminate option (a).

4.22.7.2.	centre stop lamp:	Category 1-2 with structural with of less than 2,032 mm and gross vehicle mass of less than 4,550 kg	M	M	O
		Category 2:			
	* optional on chassis-cabs and vehicles with open cargo space	vehicles with structural with of less than 2,032 mm and gross vehicle mass of less than 3,500 kg	M	M	M*
		vehicles with structural with of more than 2,032 mm and gross vehicle mass of less than 3,500 kg	M	O	M*
		vehicles with structural with of less than 2,032 mm and gross vehicle mass of less than 4,550 kg	M	M	O

Some more discussion is needed to resolve the issue of presence of centre stop lamp. It could also involve clarification of S.R.1. with regard to proper identification vehicle categories depending on the gross vehicle mass and structural with.

4.22.9.	front position lamp:	Trailers over 1,500 mm in structural width	M	O	M
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Cost benefit analysis will be needed to eliminate option (a).

4.22.11.	rear fog lamp:	All vehicles	M	O	M
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Cost benefit analysis will be needed to eliminate option (a).

4.22.13.	end-outline marker lamp:	Truck tractor - rear	M	O	M
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Cost benefit analysis will be needed to eliminate option (a).

4.22.14.1.	rear retro-reflector - non-triangular:	Trailers	M	M	O
4.22.14.2.	rear retro-reflector - triangular:	Motor vehicles	P	O	P
		Trailers	M	O	M

Discussion on identification of vehicle category by light signalling devices will continue.

4.22.15.	front retro-reflector:	Motor vehicles with all concealable headlamps	M	O	M
		Trailers	M	O	M

Cost benefit analysis will be needed to eliminate option (a).

4.22.16.	side retro-reflector:	Vehicles with structural length less than 6000 mm except truck tractors	M	M	O
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Cost benefit analysis will be needed to eliminate option (b).

Rear - truck tractors with structural length more than 6000 mm	M	O	M
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Cost benefit analysis will be needed to eliminate option (a).

4.22.17. side-marker lamp: Vehicles with structural length less than 6000 mm except truck tractors	M	M	O
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Cost benefit analysis will be needed to eliminate option (b).

Rear - truck tractors with structural length more than 6000 mm	M	O	M
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Cost benefit analysis will be needed to eliminate option (a).

		(a)	(b)	(c)
4.22.18. daytime running lamp: Motor Vehicles	?????	M	O	P

Discussion on cost benefits of DRL, impact on pedestrian safety and DRL's impact on daytime motorcycle conspicuity will continue.

4.22.19. identification lamps: Vehicles over 2,032 mm in structural width	?????	M	O	P
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Discussion on identification of vehicle category by light signalling devices will continue.

	Common	Option (a)	Option (b)
5.1.6.5. automatic switching of driving beams	P	P	O

Prohibition of **automatic switching** will be removed once Contracting Parties will agree on conditions under which such automatic switching may operate.

5.2.3.2. max. passing beam mounting height	950 mm	1200 mm	950 mm
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There are several industry and government study suggesting that lowering the maximum passing beam height would reduce glare. At present time there are no recorded crashes related to glare. Nevertheless, governments receive thousands of complaints; glare seems to affect drivers' behaviour, which may cause dangerous situation on the road. Industry claims that lowering the mounting height of the passing beam will reduce the illuminated distance; however, this concern does not seem to affect heavy-duty vehicle industry, which mounts headlamps on busses and trucks at heights corresponding with the suggested lower limit.

Discussion on this subject will continue. Cost benefits analysis seems to be necessary prior to elimination of option (a).

5.3.6.4. automatic switching of front fog lamps	P	P	O
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Prohibition of **automatic switching** will be removed once Contracting Parties will agree on conditions under which such automatic switching may operate.

5.4.4.1. Geometric visibility of reversing lamp	FMVSS 108	FMVSS 108	ECE R48
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Further discussion will continue regarding the intended functions of the reversing lamp (a. road illumination and b. signal to the pedestrians that the vehicle is about to move backwards). Impact on pedestrian safety has to be evaluated as well as cost benefits analysis have to be completed before eliminating option (b).

5.9.7. Tell-tale for front [rear?] position lamps M M O
[5.10.7.]

The actual need for such tell-tale has to be discussed and if necessary, cost benefit analysis will be needed to eliminate option (b).

5.11.6.5. automatic switching of rear fog lamps P P O

Prohibition of automatic switching will be removed once Contracting Parties will agree on conditions under which such automatic switching may operate.

5.19.6.2. daytime running lamps can be manually switched OFF ????? Temporarily Permanently

The need for DRL (mandatory, optional or prohibited) has to be firmly established before the switching requirements can be settled.