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PROPOSAL FOR DRAFT AMENDMENTS TO THE VIENNA CONVENTION ON ROAD TRAFFIC (1968)

Transmitted by the Expert from the Working Party "Brussels 1952" (GTB)

Note: The text reproduced below was prepared by the expert from GTB with the aim to align the provisions in the Vienna Convention with the technical requirements in the ECE Regulations relating to lighting and light-signalling devices. The text is based on a document distributed without a symbol (informal document No. 3) during the forty-eighth session of GRE (TRANS/WP.29/GRE/48, para. 80). The inserted text is in **bold** characters.

Note: This document is distributed to the Experts on Lighting and Light-Signalling only.

A. PROPOSAL

1. Ad Article 32 of the Convention (Rules of the use of lamps)

Paragraph 4

This paragraph shall be read as follows:

"(a) Rear fog lamps may only be lit in thick fog and falling snow, heavy rain or similar conditions.

(b) Front fog lamps may be used either with or as a substitute for passing lamps or as part of an adaptive front lighting system. They may be lit in thick fog and falling snow, heavy rain or similar conditions; they may also be used at night on narrow, winding roads, whatever the weather condition."

Paragraph 7

This paragraph shall be read as follows (deleting the last sentence):

"Domestic legislation may make it compulsory for drivers of motor vehicles to use during the day either passing lamps or daytime running lamps."

2. Ad Annex 1 to the Convention (Exceptions to the obligation to admit motor vehicles and trailers in international traffic)

Paragraph 8

This paragraph shall be read as follows: "Contracting Parties may refuse to admit to their territories in international traffic any motor vehicle equipped with passing lamps **or an adaptive front lighting system with asymmetric beams** if such beams have not been adapted to suit the direction of traffic in their territories, **or replaced by a passing beam with a symmetrical beam pattern.**"

3. Ad Annex 2 to the Convention (Registration number of motor vehicles and trailers in international traffic)

Paragraph 3

This paragraph shall be read as follows: "When the registration number is displayed on a special plate, **apart from any raised lettering or numbering**, this plate shall be flat and fixed in a vertical or nearly vertical position and at right angles to the vehicle's median longitudinal plane, **or in a position defined by national law.**"

Paragraph 4

This paragraph shall be read as follows: "Subject to the provisions of Article **61 (g)**, the plate or surface on which the registration number is displayed or painted may be of a **retro-reflecting material.**"

4. Ad Annex 5 to the Convention (Technical conditions concerning motor vehicles and trailers)

CHAPTER II (Vehicle lighting and light-signalling devices)

Paragraph 19

Subparagraph "Driving lamp"

This subparagraph shall be read as follows: " "Driving lamp" means the lamp used to illuminate the road over a long distance ahead of the vehicle **or the relevant parts of an adaptive front lighting system;**"

Subparagraph "Passing lamp"

This subparagraph shall be read as follows: " "Passing lamp" means the lamp used to illuminate the road ahead of the vehicle without causing undue dazzle or inconvenience to oncoming drivers or other road users **or the relevant parts of an adaptive front lighting system;**"

Subparagraph "Daytime (running) lamp"

This subparagraph shall be transferred immediately after the subparagraph of "Passing lamp" and shall be read as follows: " "**Daytime running lamp**" means the lamp intended to improve the daytime conspicuity and visibility of the front of a vehicle in running use **or the relevant parts of an adaptive front lighting system;**"

Additional subparagraphs to be inserted after the subparagraph of "Daytime running lamp"

These subparagraphs shall be read as follows:

" "Adaptive front lighting system" (AFS) means an adaptive passing lamp system comprising several light emitting components on either side of the vehicle, operated automatically and providing (optionally) an adaptive main beam or daytime running light;

"Bend lighting" means a lighting function to provide enhanced illumination in bends;

"Cornering lamp" means a lamp used to provide supplementary illumination of that part of the road which is located near to the forward corner of the vehicle at the side towards which the vehicle is going to turn;"

Subparagraph "Stop lamp"

This subparagraph shall be read as follows: " "Stop lamp" means the lamp used to indicate to other road users to the rear of the vehicle **that the service brake is applied and/or longitudinal movement of the vehicle is intentionally retarded;**"

Subparagraph "Illuminating surface"

This subparagraph shall be deleted.

Paragraph 21

This paragraph shall be read as follows: "With the exception of motor cycles, every motor vehicle capable of exceeding **40 km (25 miles)** per hour on level road shall be equipped in front with an even number of white or selective-yellow driving lamps **or an adaptive front lighting system** capable of adequately illuminating the road at night in clear weather. The outer edges of the illuminating surfaces of the driving lamps shall in no case be closer to the extreme outer edge of the vehicle than the outer edges of the illuminating surfaces of the passing lamps."

Paragraph 22

This paragraph shall be read as follows:

"With the exception of motor cycles, every motor vehicle capable of exceeding **40 km (25 miles)** per hour on level road shall be equipped in front with an even number of white or selective-yellow passing lamps **or an adaptive front lighting system** capable of adequately illuminating the road at night in clear weather. A motor vehicle shall be equipped with a device such that:

(a) **No more than two passing beams, including their bend lighting function (if present), may be lit simultaneously, or**

(b) **The components of an adaptive front lighting system located on either side of the vehicle contribute to the passing beam, whatever their mode of operation.**"

Paragraph 23

This paragraph shall be read as follows: "Every motor vehicle other than a two-wheeled motor cycle without side-car shall be equipped in front with two white **or amber front position lamps**. **These front position lamps**, when they are the only lamps switched on at the front of the vehicle, shall be visible at night in clear weather without causing undue dazzle or inconvenience to other road-users;"

Paragraph 26

Additional subparagraph to be inserted at the end of the paragraph

This subparagraph shall be read as follows: "**When passing lamps or an adaptive front lighting system are/is used as daytime running lamps, the electrical connections may be such that the front position lamps are not switched on.**"

Paragraph 40

This paragraph shall be read as follows: "No reversing lamp shall cause undue dazzle or inconvenience to other road-users. If reversing lamps are fitted on a motor-vehicle they shall emit **white light**. These shall be lit only when the reverse gear is engaged. **If front fog lamps are part of an adaptive front lighting system, their beams shall be adjusted to comply with the definition of a passing lamp in paragraph 19 above.**"

Paragraph 42

Additional subparagraph 42 octies to be inserted at the end of the paragraph

This subparagraph shall be read as follows: "**Every motor vehicle may be fitted with cornering lamps. If such lamps are fitted they shall emit white light.**"

Paragraph 43

Additional subparagraph (c) to be inserted at the end of the paragraph

This subparagraph shall be read as follows: "**In case of an adaptive front lighting system the sum of the light-emitting components located on the right and left side of the vehicle which are lit simultaneously shall be considered as an even number of lamps.**"

Paragraph 44

This paragraph shall be read as follows:

"Lamps on a given vehicle having the same function and facing in the same direction, shall be of the same colour.

Lamps and reflex-reflectors which are of even number shall be placed symmetrically in relation to the vehicle's median longitudinal plane, except on vehicles with an symmetrical external shape. The intensity of the lamps in each pair shall be substantially the same. **These provisions do not apply to an adaptive front lighting system.**"

Appendix

The title of the appendix shall be read as follows:

"**COLOR OF LIGHT EMITTED BY LAMPS (TRICHROMATIC COORDINATES)**"

The values for colours red and amber shall be read as follows:

"Red	limit towards yellow . . .	$y = 0.335$
	limit towards purple . . .	$y = 0.980 - x$
Amber	limit towards red	$y = 0,390$
	limit towards green . . .	$y = x - 0.120$
	limit towards white . . .	$y = 0.790 - 0.670x$ "

The sentence after the end of the list of colour of light emitted by lamps shall be read as follows:

"(a) For verifying the colorimetric characteristics of the signalling devices incorporating (a) white removable light source(s), a source of white light at a colour temperature of 2856 K (corresponding to the illuminant A of the International Commission on Illumination) shall be used.

(b) For verifying the colorimetric characteristics of the signalling devices incorporating (a) coloured removable light source(s), the light source(s) shall be operated at the voltage which produces the colour of the illuminant A for a white light source of the same type.

(c) For verifying the colorimetric characteristics of the signalling devices incorporating (a) non-removable light source(s), the light source(s) shall be operated at the voltage(s) specified by the manufacturer."

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B. JUSTIFICATION

1. Background

- 1.1 The interrelationship between the technical requirements in ECE Regulations regarding lighting and light-signalling devices and their installation and corresponding provisions in the Vienna Convention has been discussed at several instances by GRE. At the forty-third session, the Chairman invited GTB to consider in detail the prescriptions relating to lighting of the Vienna Convention, and to propose possible amendments in order to bring its text in line with the latest developments in lighting equipment of vehicles. The expert from GTB accepted to study the subject and to inform GRE about possible amendments to the Convention that should be suggested to WP.29 and WP.1 (TRANS/WP.29/GRE/43, paras. 107. - 109.).
- 1.2 The principal objectives of the Vienna Convention are set out in Article 2; Contracting Parties shall take appropriate measures to ensure that
- their rules of the road conform to the provisions of Chapter II;
 - the rules concerning the technical requirements for motor vehicles and trailers conform to the provisions of Annex 5.
- 1.3 As regards rules of the road, GTB has already drawn attention to the influence of use regulations on vehicle construction and to the negative consequences of different national provisions for manufacturers when designing the electrical connections for the installation of lighting devices in vehicles (TRANS/WP.29/GRE/2001/41). These problems have again become evident during the preparation of a draft Global Technical Regulation (GTR) on lighting installation, in particular concerning front fog lamps and daytime running lamps. The differences in national rules regarding the use of lamps can also be seen in Table 10 of document TRANS/WP.1/80.
- 1.4 In the strict legal sense, the task of GTB would be restricted to compare the ECE Regulations actually in force with the provisions of Annex 5 of the Convention. However, it should be borne in mind that
- the rules concerning the use of lighting devices may seriously affect vehicle design;
 - amendments to the Convention only occur at time intervals of several years.

It is therefore considered advisable to cover all relevant provisions of the Convention and to take into account new technical developments, such as the adaptive front lighting system (AFS) and bend lighting, which are liable to be introduced into ECE Regulations in the foreseeable future.

- 1.5 The detailed proposals for amendments are set out below. In view of ongoing work in GRE regarding new developments and their introduction into ECE Regulations these proposals should be considered as a basis for discussion.

If necessary, explanatory notes have been added.

2. Reason for proposed amendment(s):

Ad. article 32, paragraph 4.:

WP.1 is re-considering the use of front fog lamps in "heavy rain and similar conditions".

GRE is currently discussing the question of the use of front fog lamps together with a passing beam or a main beam in relation to the GTR on the installation of vehicle lighting and light signalling devices;

WP.1 is also considering the same question.

The use of front fog lamps as part of an AFS should be covered.

Ad. article 32, paragraph 7.:

The actual version of Regulation No. 48 does not require that the rear position lamps be switched on when daytime running lamps are switched on.

Annex 1:

Ad. paragraph 8.:

The text has been completed to cover all technical solutions.

Annex 2:

Ad. paragraph 3.:

Contracting Parties should have the possibility to define the position of the registration number plate on certain vehicles or categories of vehicles, which by construction do not permit the installation of a registration plate according to the current requirements in paragraph 3 of Annex 2.

Ad. paragraph 4.:

The reference to the Article 32, paragraph 5 is no longer valid as it corresponds to the original text of the Convention prior to its amendment, which entered into force on 3 September 1993.

Annex 5, CHAPTER II:

Ad. paragraph 19., definitions "Driving lamp" to "Bend lighting":

These amendments are intended to cover new technical developments such as the adaptive front lighting system (AFS) and bend lighting.

Ad. paragraph 19., definition "stop lamp":

This amendment reflects the actual state of discussion in GRE and WP.29.

Ad. paragraph 19., definition "Cornering lamp":

This amendment reflects the GRE proposal for introduction of cornering lamps into Regulation No. 48.

Ad. paragraph 19., definitions "illuminating surface":

This proposal is consequent to the proposal to amend paragraph 21 (see item 2.5.2 below).

Ad. paragraph 21.:

This wording introduces the possibility of fitting AFS; it also adapts the Convention to the current version of Regulation No.48 concerning the position of passing beam lamps at the front of a vehicle. The second sentence can be deleted in order to align the Convention to the current version of Regulation No. 48.

Ad. paragraph 22.:

This wording provides the possibility of fitting bend lighting or an AFS.

Ad. paragraph 23.:

This wording corresponds to actual requirements in Regulation No. 48 and in national regulations.

Ad. paragraph 26.:

This sentence will to allow for passing lamps and AFS to provide the daytime running lamp function.

Ad. paragraph 40.:

This wording corresponds to the actual version of Regulation No. 48 and also covers front fog lamps as part of an AFS.

Ad. paragraph 42.:

This wording would allow the fitting of cornering lamps, now included in Regulation No. 48.

Ad. paragraph 43.:

Due to the special design features of an AFS, the number and light intensity of components illuminated simultaneously may not be symmetrical to the median longitudinal plane of the vehicle. However, the technical requirements for the approval of AFS and its installation in the vehicle, which are based on research, ensure that the vehicle will be clearly recognized and identified.

Ad. paragraph 44.:

As noted under paragraph 43 above, special provisions are necessary for an AFS.

Ad. annex 5, Appendix:

The amendments reflect the harmonisation of trichromatic coordinates for amber and red and current laboratory practice.
