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1958 Agreement:
Consideration of draft amendments to existing UN Regulations submitted by GRE

Proposal for Supplement 10 to the 01 series of amendments to UN Regulation No. 74 (Installation of lighting and light-signalling devices for mopeds)

Submitted by the Working Party on Lighting and Light-Signalling *

Revision 1

The text reproduced below was adopted by the Working Party on Lighting and Light-Signalling (GRE) at its seventy-ninth session (ECE/TRANS/WP.29/GRE/79, para. 9). It is based on ECE/TRANS/WP.29/GRE/2018/14 and Annexes III, VI and VII to the report. The text refers to the three new simplified UN Regulations on Light-Signalling Devices (LSD), Road Illumination Devices (RID) and Retro-Reflective Devices (RRD) (ECE/TRANS/WP.29/2018/157, ECE/TRANS/WP.29/2018/158 and ECE/TRANS/WP.29/2018/159, respectively). It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Administrative Committee AC.1 for consideration at their November 2018 sessions.

* In accordance with the programme of work of the Inland Transport Committee for 2018–2019 (ECE/TRANS/274, para. 123 and ECE/TRANS/2018/21/Add.1, cluster 3.1), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate

Supplement 10 to the 01 series of amendments to UN Regulation No. 74 (Installation of lighting and light-signalling devices for mopeds)

Paragraph 2. and its subparagraphs, amend to read:

"2. Definitions

For the purpose of this Regulation, the definitions given in the latest series of amendments to UN Regulation No. 48 in force at the time of application for type approval shall apply, unless otherwise specified in this Regulation.

2.1. "*Vehicle type*" means a category of power-driven vehicles which do not differ from each other in such essential respects as:

2.1.1. The dimensions and external shape of the vehicle;

2.1.2. The number and position of the devices;

2.1.3. The following shall likewise not be deemed to be "vehicles of a different type":

2.1.3.1. Vehicles which differ within the meaning of paragraphs 2.1.1. and 2.1.2. above but not in such a way as to entail a change in the kind, number, position and geometric visibility of the lamps prescribed for the vehicle type in question;

2.1.3.2. Vehicles on which lamps approved under one of the Regulations annexed to the 1958 Agreement, or lamps allowed in the country in which the vehicles are registered, are fitted, or are absent where their fitting is optional;

2.2. "*Unladen vehicle*" means a vehicle without a driver, or passenger, and unladen, but with its fuel tank full and its normal complement of tools;

2.3. "*Lamp*" means a device designed to illuminate the road or to emit a light signal to other road users. Rear registration plate lamp and retro-reflectors are likewise to be regarded as lamps;

2.3.1. "*Equivalent lamps*" means lamps having the same function and authorised in the country in which the vehicle is registered; such lamps may have different characteristics from those of the lamps with which the vehicle is equipped at the time of approval, on condition that they satisfy the requirements of this Regulation;

2.3.2. "*Independent lamps*" means devices having separate illuminating surfaces, separate light sources and separate lamp bodies;

2.3.3. "*Grouped lamps*" means devices having separate illuminating surfaces and separate light sources, but a common lamp body;

2.3.4. "*Combined*" means devices having separate illuminating surfaces, but a common light source and a common lamp body;

2.3.5. "*Reciprocally incorporated*" means devices having separate light sources or a single light source operating under different conditions (for example, optical, mechanical, electrical differences), totally or partially common illuminating surfaces and a common lamp body;

2.3.6. "*Front position lamp*" means the lamp used to indicate the presence of the vehicle when viewed from the front;

2.3.7. "*Retro-reflector*" means a device used to indicate the presence of a vehicle by the reflection of light emanating from a light source not connected to the vehicle, the observer being situated near the source;

For the purpose of this Regulation, retro-reflecting number plates are not considered as retro-reflectors:

2.3.8. "*Direction-indicator lamp*" means the lamp used to indicate to other road-users that the driver intends to change direction to the right or to the left;

A direction-indicator lamp or lamps may also be used according to provisions of UN Regulation No. 97.

2.3.9. "*Rear position lamp*" means the lamp used to indicate the presence of the vehicle when viewed from the rear;

2.4. "*Light-emitting surface*" of a "lighting device", "light-signalling device" or a retro-reflector means all or part of the exterior surface of the transparent material as declared in the request for approval by the manufacturer of the device on the drawing, see Annex 3;

2.5. "*Illuminating surface*" (see Annex 3);

2.5.1. "*Illuminating surface of a lighting device*" (driving beam (main beam) headlamp and passing beam (dipped beam) headlamp means the orthogonal projection of the full aperture of the reflector, or in the case of headlamps with an ellipsoidal reflector of the "projection lens", on a transverse plane. If the lighting device has no reflector, the definition of paragraph 2.5.2. shall be applied. If the light emitting surface of the lamp extends over part only of the full aperture of the reflector, then the projection of that part only is taken into account.

In the case of a passing beam headlamp, the illuminating surface is limited by the apparent trace of the cut-off on to the lens. If the reflector and lens are adjustable relative to one another, the mean adjustment should be used;

2.5.2. "*Illuminating surface of a light-signalling device other than a retro-reflector*" (front position lamp, direction indicator lamp, stop lamp and rear position lamp) means the orthogonal projection of the lamp in a plane perpendicular to its axis of reference and in contact with the exterior light-emitting surface of the lamp, this projection being bounded by the edges of screens situated in this plane, each allowing only 98 per cent of the total luminous intensity of the light to persist in the direction of the axis of reference. To determine the lower, upper and lateral limits of the illuminating surface, only screens with horizontal or vertical edges shall be used;

2.5.3. "*Illuminating surface of a retro-reflector*" (paragraph 2.3.7.) means the orthogonal projection of a retro-reflector in a plane perpendicular to its axis of reference and delimited by planes continuous to the outermost parts of the retro-reflector's optical system and parallel to that axis. For the purposes of determining the lower, upper and lateral edges of the device, only horizontal and vertical planes shall be considered;

2.6. The "*apparent surface*" for a defined direction of observation means, at the request of the manufacturer or his duly accredited representative, the orthogonal projection of:

either the boundary of the illuminating surface projected on the exterior surface of the lens (a-b), or the light-emitting surface (c-d), in a plane perpendicular to

the direction of observation and tangential to the most exterior point of the lens (see Annex 3 to this Regulation);

2.7. "*Centre of reference*" means the intersection of the axis of reference with the exterior light-emitting surface; it is specified by the manufacturer of the lamp;

2.8. "*Angles of geometric visibility*" means the angles which determine the field of the minimum solid angle in which the apparent surface of the lamp must be visible. That field of the solid angle is determined by the segments of the sphere of which the centre coincides with the centre of reference of the lamp and the equator is parallel with the ground. These segments are determined in relation to the axis of reference. The horizontal angles β, correspond to the longitude and the vertical angles α to the latitude. There must be no obstacle on the inside of the angles of geometric visibility to the propagation of light from any part of the apparent surface of the lamp observed from infinity. If measurements are taken closer to the lamp, the direction of observation must be shifted parallel to achieve the same accuracy.

On the inside of the angles of geometric visibility no account is taken of obstacles, if they were already presented when the lamp was type approved.

If, when the lamp is installed, any part of the apparent surface of the lamp is hidden by any further parts of the vehicle, proof shall be furnished that the part of the lamp not hidden by obstacles still conforms to the photometric values prescribed for the approval of the device as an optical unit (see Annex 3 of this Regulation). Nevertheless, when the vertical angle of geometric visibility below the horizontal may be reduced to 5° (lamp at less than 750 mm above the ground) the photometric field of measurements of the installed optical unit may be reduced to 5° below the horizontal.

2.9. "*Extreme outer edge*", on either side of the vehicle means the plane parallel to the median longitudinal plane of the vehicle and tangent to the latter's lateral outer edge, disregarding rear-view mirrors, direction indicators, position lamps and retro-reflectors;

2.10. "*Over-all width*" means the distance between the two vertical planes defined in paragraph 2.10. above;

2.11. "*A single lamp*" means a device or part of a device, having one function and one apparent surface in the direction of the reference axis (see paragraph 2.6. of this Regulation) and one or more light sources.

For the purpose of installation on a vehicle, a "single lamp" also means any assembly of two independent or grouped lamps, whether identical or not, having the same function, if they are installed so that the projection of their apparent surfaces in the direction of the reference axis occupies not less than 60 per cent of the smallest rectangle circumscribing the projections of the said apparent surfaces in the direction of the reference axis. In such a case, each of these lamps shall, where approval is required, be approved as a type "D" lamp. This possible combination does not apply to driving beam headlamps and passing beam headlamps.

2.12. "*Colour of the light emitted from the device*". The definitions of the colour of the light emitted given in UN Regulation No. 48 and its series of amendments in force at the time of application for type approval shall apply to this Regulation."

Paragraph 3.2.1., amend to read:

"3.2.1. A description of the vehicle type with regard to the items mentioned in paragraphs 2.1.1. and 2.1.2. above; the vehicle type shall be specified;"

Paragraph 3.2.4., amend to read:

"3.2.4. If necessary, in order to verify the conformity to the prescriptions of the present Regulation, a layout drawing or drawings of each lamp showing the illuminating surface, as defined in paragraph 2.5.1. above, the light-emitting surface as defined in paragraph 2.4., the axis of reference and the centre of reference as defined in paragraph 2.7. This information is not necessary in the case of the rear registration plate illuminating device."

Paragraph 3.2.5., amend to read:

"3.2.5. The application shall include a statement of the method used for the definition of the apparent surface (paragraph 2.6.)"

Insert a new paragraph 5.19., to read:

"5.19. A device type approved according to any preceding series of amendments to UN Regulations Nos. [LSD] and/or [RID] and/or [RRD] is deemed equivalent to one approved according to the latest series of amendments to the pertinent UN Regulations Nos. [LSD] and/or [RID] and/or [RRD], when the change indexes (defined in UN Regulation No. 48) related to each individual lamp (function) do not differ. In this case such a device may be fitted on the vehicle to be type approved without any update of the device type approval documents and device markings."

Paragraph 6.1.1., amend to read:

"6.1.1. Number

…

(g) Class A, BS, CS, DS or ES of UN Regulation No. [RID]"

*Paragraph 6.2.1. and footnote *,* amend to read:

"6.2.1. Number

…

(i) Class A, AS*, BS, CS, DS or ES of UN Regulation No. [RID]

* Headlamps of Class A of UN Regulation No. 113 with LED modules or class AS of UN Regulation No. [RID] with LED modules only on vehicles with a maximum design speed not exceeding 25 km/h."

Paragraph 6.2.4., amend to read:

"6.2.4. Geometric visibility

Defined by angles α and β as specified in paragraph 2.8.:

α = 15° and 10° downwards;

β = 45° to the left and to the right for a single lamp;

β = 45° outwards and 10° inwards for each pair of lamps.

The presence of partitions or other items of equipment near the head-lamp shall not give rise to secondary effects causing discomfort to other road users."

Paragraph 6.8.2. and footnote 4, amend to read:

"6.8.2. Arrangement

Two front indicators (category 11[4]);

Two rear indicators (category 12[4]).

[4] May be replaced by indicators of categories 1 and 2 respectively of UN Regulations No. 6 or [LSD]"

Annex 5

Paragraph 1.2.1., amend to read:

"1.2.1. The angles of geometric visibility shall be checked in accordance with paragraph 2.8. of this Regulation."