The text reproduced below was prepared by OICA to improve the adopted amendments to Regulations Nos. 6 and 50 (based on ECE/TRANS/WP.29/GRE/2016/20) as reproduced in Annex IV of the report of the 76. GRE session (ECE/TRANS/WP.29/GRE/76).

The modifications to the existing text of Annex IV are marked in bold for new or strikethrough and highlighted in yellow for deleted characters.

A. Proposal for 02 series of amendments to Regulation No. 6 (Direction indicators)

Paragraph 1.3., amend to read:

- "1.3. "Direction indicators of different types" means lamps which differ in such essential respects as:
 - a) The trade name or mark;
 - b) The characteristics of the optical system (levels of intensity, light distribution angles, category of light source, light source module, etc.);
 - c) The category of direction indicator lamps;
 - d) The variable intensity control, if any;
 - e) The sequential activation of light sources, if any.

Nevertheless, direction indicators capable of being activated in different modes (sequential or not) without any modification of the optical characteristics of the lamp do not constitute "Direction indicators of different types".

A change of the colour of the light source or the colour of any filter does not constitute a change of type."

Paragraph 5.6., amend to read:

- "5.6. For direction indicator lamps of categories 1, 1a, 1b, 2a or 2b the flash may be produced by sequential activation of their light sources if the following conditions are met:
 - (a) Each light source, after its activation, shall remain lit until the end of the ON cycle;
 - (b) The sequence of activation of the light sources shall produce a signal which proceeds in a uniform progressive manner from inboard towards the outboard edge of the light emitting surface; when fitted on the vehicle;
 - (c) It shall be one signal with no interruption and no vertical oscillations (e.g. not more than one change of direction along the vertical axis). The distance between two adjacent/tangential distinct parts of the light emitting surface of the sequential direction indicator shall not exceed 50mm, when measured perpendicularly to the reference axis, instead of the values defined in paragraph 5.7.2 of Regulation 48. These

interruptions of the signal shall not create any overlap in the vertical axis between the different parts, from inboard towards the outboard of the vehicle, and shall not be used for any other lighting or light signalling functions;

- (d) The variation shall finish no more than 200ms after the beginning of the ON cycle;
- (e) The orthogonal projection of the light emitting surfaces of the direction indicator in the direction of the axis of reference shall be circumscribed by a rectangle on a plane normal to the axis of reference and having its longer sides parallel to the H-plane. The ratio of the horizontal to the vertical sides shall not be less than 1.7.
- (f) A direction indicator capable of being activated in different modes (sequential or not) shall not mix both signals simultaneously. The front or the rear direction indicators installed on the same side of the vehicle shall not operate in different modes.

Compliance to the conditions mentioned above shall be verified in flashing mode."

14. TRANSITIONAL PROVISIONS

- 14.15. As from the official date of entry into force of the 02 series of amendments, no Contracting Party applying this Regulation shall refuse to grant approval under this Regulation as amended by the 02 series of amendments.
- 14.16. As from 01 September 2019 Contracting Parties applying this Regulation shall grant approvals only if the type of direction indicator to be approved meets the requirements of this Regulation as amended by the 02 series of amendments.
- 14.17. Contracting Parties applying this Regulation shall not refuse to grant extensions of approval to the preceding series of amendments to this Regulation.

B. Proposal for Supplement 19 to the original series of amendments to Regulation No. 50 (Position, stop, direction indicator lamps for mopeds and motorcycles)

Paragraph 6.8., amend to read:

- "6.8. For direction indicator lamps of categories 11, 11a, 11b, 11c or 12 the flash may be produced by sequential activation of their light sources if the following conditions are met:
 - (a) Each light source, after its activation, shall remain lit until the end of the ON cycle;
 - (b) The sequence of activation of the light sources shall produce a signal which proceeds in a uniform progressive manner from inboard towards the outboard edge of the light emitting surface; when fitted on the vehicle:

- (c) It shall be one signal with no interruption and no vertical oscillations (e.g. not more than one change of direction along the vertical axis). The distance between two adjacent/tangential distinct parts of the light emitting surface of the sequential direction indicator shall not exceed 50mm, when measured perpendicularly to the reference axis, instead of the values defined in paragraph 5.6.2 of Regulation 53. These interruptions of the signal shall not create any overlap in the vertical axis between the different parts, from inboard towards the outboard of the vehicle, and shall not be used for any other lighting or light signalling functions;
- (d) The variation shall finish no more than 200ms after the beginning of the ON cycle;
- (e) The orthogonal projection of the light emitting surfaces of the direction indicator in the direction of the axis of reference shall be circumscribed by a rectangle on a plane normal to the axis of reference and having its longer sides parallel to the H-plane. The ratio of the horizontal to the vertical sides shall not be less than 1.7.
- (f) A direction indicator capable of being activated in different modes (sequential or not) shall not mix both signals simultaneously.

The front or the rear direction indicators installed on the same side of the vehicle shall not operate in different modes.

Compliance to the conditions mentioned above shall be verified in flashing mode."

C. Proposal for Supplement ?? to the 06 series of Regulation No. 48 (Installation of lighting and light-signalling devices):

Paragraph 6.5.7, amend to read:

6.5.7. 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.

On M1 and N1 vehicles less than 6m in length, with an arrangement complying with Paragraph 6.5.5.2. above, the amber side-marker lamps, when mounted, shall also flash at the same frequency (in phase) with the direction indicator lamps.

A direction indicator capable of being activated in different modes (static or sequential), shall not switch between both modes once activated.

If two optional lamps (category 2a or 2b) are installed on vehicles in categories M2, M3, N2, N3, they shall be operated in the same mode as the other mandatory rear direction indicator lamps (category 2a or 2b); i.e. static or sequential.

Paragraph 6.6.1. amend to read:

6.6.1. Presence

Mandatory.

The signal shall be given by simultaneous operation of the direction-indicator lamps in accordance with the requirements of Paragraph 6.5. above.

All direction indicators of the category 1 (1, 1a, 1b) activated simultaneously shall operate in the same mode; i.e. static or sequential.

All direction indicators of the category 2 (2a, 2b) activated simultaneously shall operate in the same mode; i.e. static or sequential.

II. Justification

- 1. The text proposed during the last GRE meeting contains amendments belonging to Regulation No. 48, since it concerns installation requirements.
- 2. Therefore, the OICA experts proposes an amendment which seeks a clarification of the supplement proposed at the last GRE.

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