## Improvement of GTB proposal for "Driver assistant projections" (GRE/2020/4)

This informal document is intended to provide editorial improvements to the text of the GTB proposal for "Driver assistant projections" (GRE/2020/4).

Further to the introduction of paragraph 3.2.8. with Suppl. 13 to the 06 series of amendments to UN Regulation No. 48, the new paragraph proposed with this proposal shall become 3.2.9.

To the best of the author's knowledge, the proposed footnote 1 should in fact be footnote 18.

For prompt reference, all the modifications are marked with yellow highlight. No modification to the contents of the original proposal GRE/2020/4 is introduced.

## A. New Supplement to the 06 series of amendments to UN Regulation No. 48

Add a new paragraph 2.7.8. to read:

"2.7.8. "Driver Assistance Projection" means a modification of the light distribution for driver assistance purposes, exclusively as patterns (simple geometric shapes such as lines, rectangles, triangles, etc. without any complex combination of all of them) and/or simple symbols, without causing discomfort, distraction or glare to road users and without causing distraction to the driver."

*Add a new paragraph 3.2.89*. to read:

"3.2.89. Where a function is able to provide driver assistance projections on the road, a list of these patterns or symbols shall be provided by the manufacturer"

Add a new paragraph 6.22.9.3.2. and its subparagraphs to read:

"6.22.9.3.2. The adaptive main-beam may produce driver assistance projections as patterns or symbols on the road in order to inform or warn the driver appropriately regarding special traffic situations or conditions 118.

Examples of driver assistance projections are given, but not restricted to:

- slippery road warning;
- lane keeping assist;
- rear-end collision warning;
- guidance on road construction sites.
- 6.22.9.3.2.1. The lateral distance from the outer edges of the driver assistance projections symbols or patterns on the road with respect to the trajectory of the centre of gravity of the vehicle shall not be more than 1,875 mm. This shall be demonstrated by the manufacturer by calculation or by other means accepted by the Type Approval Authority.
- 6.22.9.3.2.2. If symbols are used, they shall follow the design principles laid down in ISO 2575:2010.2

<sup>&</sup>lt;sup>418</sup> The symbols shall not be in conflict with pertinent traffic rules."

## B. New Supplement to UN Regulation No. 149

Add a new paragraph 3.1.3.4. to read:

"3.1.3.4. In the case of driver assistance projections; the projection of patterns or symbols it shall specify the size (horizontal and vertical angular limits) of the zone used for performing said projections."

Renumber existing paragraphs 3.1.3.4. to 3.1.3.7. accordingly.

Add a new paragraph 5.3.3.8. to read:

"5.3.3.8. Driver assistance projections according to UN Regulation No. 48, paragraph 6.22.9.3.2., may be part of the driving-beam light distribution within a zone limited by the following angles:

vertically: - 1° and below

horizontally:  $\pm 25^{\circ}$ 

The projections may be produced by modifying the beam pattern in the zone defined above, where the luminous intensity in any point of the entire driving beam shall not exceed the maximum value (IM) according to paragraph 5.1.3.5."