

Proposal for improvement to GRE/2018/51

Proposal for Supplement [10] to the 05 series of amendments and Supplement [8] to the 06 series of amendments to UN Regulation No. 48

I. Proposal

Paragraph 5.26., amend to read:

“5.26. Rear direction indicator lamps of category 2b, rear position lamps of category R2, stop lamps of category S2 (except stop lamps of category S4) and rear fog lamps of category F2 with variable luminous intensity control, which respond simultaneously to at least one or more of the following external influences: ambient lighting, fog, snowfall, rain, spray, dust clouds, contamination of the light emitting surface, listed in paragraphs 5.26.1. and 5.26.2., are allowed, provided that their prescribed intensity relationship is maintained throughout variation transitions. No sharp variation of intensity shall be observed during transition. Stop lamps of category S4 may produce variable luminous intensity independent from the other lamps. It may be possible for the driver to set the functions above to luminous intensities corresponding to their steady category and to return them to their automatic variable category.

5.26.1. Environmental and traffic conditions

Variation of the luminous intensity, in the limits prescribed in the pertinent UN Regulations, is allowed in relation to the following conditions:

- (a) ambient lighting,
- (b) fog,
- (c) snowfall,
- (d) rain,
- (e) spray,
- (f) dust clouds,
- (g) contamination of the light emitting surface,
- (h) vehicle speed is below 20 km/h,
- (i) distance to the following vehicle(s) is less than 20m.

5.26.2. Traffic conditions

Reduction of the luminous intensity, in the limits prescribed in the pertinent UN Regulations, is allowed only if:

- (a) the vehicle speed is below 20 km/h, and

~~(b) — the distance to the following vehicle(s) is less than 20 m.~~

5.26.32. Stop lamps of category S4 may produce variable luminous intensity, based on the external influences listed in paragraphs 5.26.1. and 5.26.2., independently from the other lamps.

5.26.43. No sharp variation of intensity shall be observed during transition.

It may be possible for the driver to set the functions above to luminous intensities corresponding to their steady category and to return them to their automatic variable category.”

II. Justification

1. A **safe operation** of rear turn-direction indicators of category 2b, rear position lamps of category R2, stop lamps of category S2 and rear fog lamp of category F2, which are varying their luminous intensity, as already today, **is ensured by**

- a) the **photometric limits** in the pertinent UN Regulations to be fulfilled and
- b) the provision in 5.26.4. in ECE/TRANS/WP.29/GRE/2018/51 of **not having any sharp intensity variation** during the transitions.

This is the case for the already listed parameters as e.g. ambient lighting or rain and can consequently be assumed to be true for further and newly introduced parameters, as in ECE/TRANS/WP.29/GRE/2018/51 the *vehicle speed is below 20 km/h* or the *distance to the following vehicle(s) is less than 20m*.

2. Hence this document proposes to further **simplify** and **improve** ECE/TRANS/WP.29/GRE/2018/51 by deleting 5.26.2. and introduce the new parameters *vehicle speed is below 20 km/h* and *distance to the following vehicle(s) is less than 20m* in 5.26.1. Including these new parameters in 5.26.1. will prevent limiting further possible safety-benefits, when using one or both of these, exclusively for the one described urban traffic situation and enhancing more advanced luminous intensity adoptions for various other situations by allowing

- a) the combination of the parameters *vehicle speed is below 20 km/h* or *distance to the following vehicle(s) is less than 20m* with the other parameters in 5.26.1.; e.g. the coupling of the three parameters vehicle speed, ambient lighting and rain, or e.g. the coupling of the two parameters distance and fog,
- ~~b) — implementing more than only two luminous intensity levels when using the parameters vehicle speed and distance to the following vehicle(s); e.g. introducing a third higher luminous intensity level for vehicle speed far above 20 km/h and distances below 20m.~~
- c) vehicles not being equipped with sensors being capable of measuring rear end distances to still use the additional parameter vehicle speed for improving the lamps' luminous intensity adaption.