

Proposal for a new Supplement to the 04 and 05 series of amendments to UN Regulation No. 78

The amendments to the text are in bold for new text and in strikethrough for deleted text.

I. Proposal

Paragraph 5.1.17.2., amend to read:

"5.1.17.2. In addition, in case of vehicles powered solely by electric powertrain equipped with electric regenerative braking systems ~~as defined in paragraph 2.32. of this Regulation~~, which produces a retarding force upon release of the accelerator control, the braking signal shall be generated also according to the following provisions ⁴:

<i>Vehicle decelerations</i>	<i>Signal generation</i>
$\leq 0.7 \text{ m/s}^2$	The signal shall not be generated
$> 0.7 \text{ m/s}^2$ and $\leq 1.3 \text{ m/s}^2$	The signal may be generated
$> 1.3 \text{ m/s}^2$	The signal shall be generated

~~In all cases the signal shall be de-activated at the latest when the deceleration has fallen below 0.7 m/s^2 .~~*

~~* At the time of type approval, compliance with this requirement shall be confirmed by the vehicle manufacturer~~

Once generated the signal shall be kept as long as a deceleration demand persists. However, the signal may be suppressed at standstill.

An appropriate measure (e.g. switch-of-hysteresis, averaging, time delay) shall be implemented in order to avoid fast changes of the signal resulting in flickering of the stop lamps.

⁴ At the time of type approval, compliance with this requirement shall be confirmed by the vehicle manufacturer."

Insert a new paragraph 5.1.17.3., to read:

"5.1.17.3. **The signal shall not be generated when retardation is solely produced by the natural braking effect of the engine, air-/rolling resistance and/or road slope.**"

II. Justification

1. The objective of this proposal is to keep the alignment of UN Regulation No. 78 with the latest amendment to UN Regulation No. 13-H regarding the deceleration thresholds for the activation of the stop lamp(s) under regenerative braking.

2. UN Regulation No. 78 currently contains provisions to generate the signal for the stop lamp activation under regenerative braking for vehicles of Category L. The deceleration thresholds in UN Regulation No. 78 are aligned with those in the current version of

UN Regulation No. 13-H, which ensures consistent stop lamp behavior across different vehicle categories and therefore avoids confusing road users driving behind a braking vehicle, regardless of its category.

3. In December 2020, GRVA adopted a proposal by OICA and CLEPA modifying the provisions for the generation of a braking signal to illuminate stop lamps in UN Regulation No. 13-H (ECE/TRANS/WP.29GRVA/2020/31), to ensure that the stop lamp illumination reflects the intention to decelerate, independently from the type of propulsion. For that purpose, the requirement to deactivate the stop lamp signal when deceleration falls below 0.7 m/s^2 under regenerative braking was removed. For the sake of consistency, IMMA proposes to align the deceleration thresholds in UN Regulation No. 78 accordingly.
