

17 January 2020

Agreement

Concerning the Adoption of Harmonized Technical United Nations Regulations for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these United Nations Regulations*

(Revision 3, including the amendments which entered into force on 14 September 2017)

Addendum 77 – UN Regulation No. 78

Revision 2 - Amendment 1

Supplement 1 to the 04 series of amendments – Date of entry into force: 11 January 2020

Uniform provisions concerning the approval of vehicles of categories L₁, L₂, L₃, L₄ and L₅ with regard to braking

This document is meant purely as documentation tool. The authentic and legal binding text is: ECE/TRANS/WP.29/2019/46.



UNITED NATIONS

* Former titles of the Agreement:

Agreement concerning the Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts, done at Geneva on 20 March 1958 (original version); Agreement concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these Prescriptions, done at Geneva on 5 October 1995 (Revision 2).



Insert a new paragraph 2.31., to read:

"2.31. "Braking Signal" means a logic signal indicating when illumination of the stop lamp is required or allowed as specified in paragraph 5.1.17. of this Regulation".

Insert a new paragraph 2.32., to read:

"2.32. "Electric Regenerative Braking System" means a braking system which, during deceleration, provides for the conversion of vehicle kinetic energy into electrical energy and is not part of the service braking system."

Insert a new paragraph 5.1.17. and its sub-paragraphs, to read:

"5.1.17. Generation and de-activation of the braking signal to illuminate stop lamp(s) as defined in UN Regulation No. 53 shall only be under the following conditions:

5.1.17.1. Application of any service brake by the rider shall generate a braking signal that will be used to illuminate the stop lamps.

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:

<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 .*"

Insert a footnote *, to read:

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