

22 November 2023

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 52 – UN Regulation No. 53

Revision 5 – Amendment 4

Supplement 4 to the 03 series of amendments – Date of entry into force: 24 September 2023

Uniform provisions concerning the approval of category L₃ vehicles with regard to the installation of lighting and light-signalling devices

This document is meant purely as documentation tool. The authentic and legal binding text is: ECE/TRANS/WP.29/2023/33.



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 2.22., to read:

"2.22. "Rear-end collision alert signal (RECAS)" means an automatic signal given by the leading vehicle to the following vehicle. It warns that the following vehicle needs to take emergency action to avoid a collision."

Paragraph 5.13., amend to read:

"5.13. Colours of the lights
 ...
 Rear-end collision alert signal: amber"

Insert a new paragraph 5.15.8., to read:

"5.15.8. Rear-end collision alert signal (paragraph 6.17.)."

Paragraph 6.9.2., amend to read:

"6.9.2. Electrical connection

 The signal shall be given by means of a separate control enabling all the direction indicators to be supplied with current simultaneously. In addition, it may be activated automatically in the event of a vehicle being involved in a collision or after the de-activation of the emergency stop signal, as specified in paragraph 6.14. below. In such cases, it may be turned OFF manually.

 In addition, the hazard warning signal may be switched ON automatically to indicate to other road-users the risk of imminent danger as defined by Regulations; in this case, the signal shall remain switched ON until it is manually or automatically switched OFF."

Insert a new paragraph 6.17. and its subparagraphs, to read:

- "6.17. Rear-end collision alert signal
- 6.17.1. Presence
 Optional.
 The rear-end collision alert signal shall be given by the simultaneous operation of all the direction indicator lamps fitted as described in paragraph 6.17.7.
- 6.17.2. Number
 As specified in paragraph 6.3.1.
- 6.17.3. Arrangement
 As specified in paragraph 6.3.2.
- 6.17.4. Position
 As specified in paragraph 6.3.3.
- 6.17.5. Geometric visibility
 As specified in paragraph 6.3.4.
- 6.17.6. Orientation
 As specified in paragraph 6.3.5.
- 6.17.7. Electrical connections
 Compliance with these requirements shall be demonstrated by the applicant, by simulation or other means of verification accepted by the Technical Service responsible for type approval.
- 6.17.7.1. All the lamps of the rear-end collision alert signal shall flash in phase at a frequency of 4.0 +/- 1.0 Hz.

- 6.17.7.1.1. However, if any of the lamps of the rear-end collision alert signal to the rear of the vehicle use filament light sources the frequency shall be 4.0 +0.0/-1.0 Hz.
- 6.17.7.2. The rear-end collision alert signal shall operate independently of other lamps.
- 6.17.7.3. The rear-end collision alert signal shall be switched ON and OFF automatically.
- 6.17.7.4. The rear-end collision alert signal shall not be switched ON if the direction indicator lamps, the hazard warning signal or the emergency stop signal is activated.
- 6.17.7.5. The rear-end collision alert signal may only be switched ON under the following conditions:

V_r	Activation
$V_r > 30 \text{ km/h}$	$TTC \leq 1.4$
$V_r \leq 30 \text{ km/h}$	$TTC \leq 1.4 / 30 \times V_r$

" V_r (Relative Speed)": means the difference in speed between a vehicle with rear-end collision alert signal and a following vehicle in the same lane.

"TTC (Time to collision)": means the estimated time for a vehicle with rear-end collision alert signal and a following vehicle to collide assuming the relative speed at the time of estimation remains constant.

- 6.17.7.6. The switch ON period of the rear-end collision alert signal shall be not more than 3 seconds.
- 6.17.8. Tell-tale
Optional."