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1958 Agreement:
Consideration of additional proposals for amendments to existing UN Regulations submitted by the Working Parties subsidiary to the World Forum, if any

Proposal for a Supplement 2 to the 02 series of amendments to UN Regulation No. 13-H (Brakes of M_1 and N_1 vehicles)

Submitted by the Working Party on Automated/Autonomous and Connected Vehicles*

The text reproduced below was adopted by the Working Party on Automated/Autonomous and Connected Vehicles (GRVA) at its twenty-third session (ECE/TRANS/WP.29/GRVA/23, para. 23). It is based on: ECE/TRANS/WP.29/GRVA/2025/40 as amended by informal document GRVA-23-15. It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Administrative Committee (AC.1) for consideration at their March 2026 sessions.

* In accordance with the programme of work of the Inland Transport Committee for 2026 as outlined in proposed programme budget for 2026 (A/80/6 (Sect. 20), table 20.7), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

Paragraph 1.2.4., shall be deleted.

Paragraph 2.3., amend to read:

2.3. "*Braking equipment*" means the combination of parts whose function is progressively to reduce the speed of a moving vehicle or bring it to a halt, or to keep it stationary if it is already halted; these functions are specified in paragraph 5.1.2. The system consists of the control (if any), the transmission, and the brake proper;

Paragraph 2.5., amend to read:

2.5. "*Transmission*" means the combination of components comprised between the control and/or ADS (as applicable), and the brake and linking them functionally. The transmission may be mechanical, hydraulic, pneumatic, electric or mixed. Where the braking power is derived from or assisted by a source of energy independent of the driver, the reserve of energy in the system is likewise part of the transmission;

The transmission is divided into two independent functions: the control transmission and the energy transmission. Whenever the term "transmission" is used alone in this Regulation, it means both the "control transmission" and the "energy transmission":

Paragraph 5.1.2.1., amend to read:

5.1.2.1. Service braking system

The service braking system shall make it possible to control the movement of the vehicle and to halt it safely, speedily and effectively, whatever its speed and load, on any up or down gradient. It shall be possible to graduate this braking action. A driver, if any, shall be able to achieve this braking action from his driving seat without removing his hands from the steering control.

Paragraph 5.1.2.2., amend to read:

5.1.2.2. Secondary braking system

The secondary braking system shall make it possible to halt the vehicle within a reasonable distance in the event of failure of the service braking system. It shall be possible to graduate this braking action. A driver, if any, shall be able to obtain this braking action from his driving seat while keeping at least one hand on the steering control. For the purposes of these provisions, it is assumed that not more than one failure of the service braking system can occur at one time.

Paragraph 5.1.2.3., amend to read:

5.1.2.3. Parking braking system

The parking braking system shall make it possible to hold the vehicle stationary on an up or down gradient even in the absence of the driver, the working parts being then held in the locked position by a purely mechanical device. A driver, if any, shall be able to achieve this braking action from his driving seat.

Paragraph 5.2.2.1., amend to read:

"5.2.2.1. Except for vehicles of categories X and Y[1], there shall be at least two controls, independent of each other and readily accessible to the driver from his normal driving position.

Except for vehicles of categories X and Y, every brake control shall be designed such that it returns to the fully off position when released. This

[1] As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3.), document ECE/TRANS/WP.29/78/Rev.8, para.2 https://unece.org/transport/standards/transport/vehicleregulations-wp29/resolutions

requirement shall not apply to a parking brake control when it is mechanically locked in an applied position;"

Paragraph 5.2.2.8., amend to read:

5.2.2.8. if the service braking force and transmission depend exclusively on the use, controlled by the driver or the ADS, of an energy reserve, there shall be at least two completely independent energy reserves, each provided with its own transmission, likewise independent; each of them may act on the brakes of only two or more wheels so selected as to be capable of ensuring by themselves the prescribed degree of secondary braking without endangering the stability of the vehicle during braking; in addition, each of the aforesaid energy reserves shall be equipped with a warning device as defined in paragraph 5.2.14. below;

Paragraph 5.2.19.4., amend to read:

5.2.19.4. After the powertrain has been deactivated and/or the key removed it shall remain possible to apply the parking braking system, whereas releasing by using the parking brake control shall be prevented.

However, the parking braking system may also be released when this action is part of an operation of a remote-control system fulfilling the technical requirements of an ACSF of Category A as specified in the 02 series of amendments to UN Regulation No. 79 or later series of amendments.

Paragraph 5.3., amend to read:

5.3. Special provisions for vehicles equipped with an Automated Driving System

The braking system of any vehicle equipped with an Automated Driving System shall fulfil the following requirements.

Paragraph 5.3.3., amend to read:

5.3.3. Whilst an ADS feature is active, warnings (e.g. defect warning signals, signals from a warning device, failure status) and other information intended for the driver as specified in this UN Regulation (including those received from a trailer) shall be transmitted to the ADS.

The means by which it is ensured that existing detected faults are transmitted to the ADS before an ADS feature becomes active (e.g. previously detected faults which remain present) shall be documented by the manufacturer and demonstrated in accordance with Annex 8.

Insert new paragraph 5.3.4. to read:

5.3.4. Without prejudice to the requirements of other applicable regulations, the braking control(s) and transmission links between the braking control(s) and brake(s) may be disabled or disconnected whilst an ADS feature is active.

Annex 3, insert new paragraphs 1.1.3. and 1.1.4., to read:

1.1.3. For vehicles of categories X and Y, all tests in this annex shall be conducted, and all respective requirements shall be fulfilled. In the absence of manual driving controls, braking tests shall be conducted using dedicated activation methods, which may include:

(a) A test mode allowing to manually control or trigger the braking functions, or

(b) Any other method subject to agreement between the vehicle manufacturer and the technical service, ensuring that the evaluation accurately reflects real-world ADS braking performance.

Wherever this annex details a control being actuated or a force being applied, that shall be understood as a braking demand being made through the selected activation method above. The manufacturer shall demonstrate that the test activation method accurately replicates ADS braking performance, and a detailed description of the method used shall be included in the test report. The braking demand made shall be recorded in the test report alongside the results of each test.

1.1.4. For vehicles equipped with an ADS, other than those of category X or Y, the tests in this annex shall be performed at least in the manual driving mode. Tests do not have to be performed in ADS mode providing the manufacturer can demonstrate to the technical service that the same braking performance can be achieved when braking demands are made by the ADS. However, testing to verify this shall be performed at the request of the technical service.

Annex 4, paragraph 1.2.3.6., amend to read:

1.2.3.6. The capability to achieve the prescribed service braking performance at the first actuation shall be confirmed by the Type-0 dynamic testing in accordance with Annex 3, with an initial level of energy in the electrical storage devices not greater than the specified values of energy specified in paragraph 1.2.2.1.

As an alternative to the dynamic testing above, the actuation of the brake control may be done in static condition. The power necessary to deliver this performance shall be determined using the same procedures as those described in paragraph 1.2.3.6.