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World Forum for Harmonization of Vehicle Regulations**Working Party on Automated/Autonomous and Connected Vehicles****Eleventh session**

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Item 8 (c) of the provisional agenda

UN Regulations Nos. 13, 13-H, 139, 140 and UN GTR No. 8:**Clarifications****Proposal for the new 12 series of amendments to UN
Regulation No. 13 (Heavy vehicle braking)****Submitted by the expert from the International Organization of Motor
Vehicle Manufacturers***

This proposal was prepared by the expert from the International Organization of Motor Vehicle Manufacturers (OICA), based on informal document GRVA-10-33 at the tenth session of the Working Party on Automated/Autonomous and Connected Vehicles (GRVA) in May 2021. The modifications of the existing Regulation are marked in bold for new or strikethrough for deleted characters.

* In accordance with the programme of work of the Inland Transport Committee for 2021 as outlined in proposed programme budget for 2021 (A/75/6 (Sect.20), para 20.51), 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.



I. Proposal

Paragraph 5.1.2.3., recalled for easy convenience:

“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. The driver shall be able to achieve this braking action from his driving seat, subject, in the case of a trailer, to the provisions of paragraph 5.2.2.10. of this Regulation.

The trailer air brake and the parking braking system of the towing vehicle may be operated simultaneously provided that the driver is able to check, at any time, that the parking brake performance of the vehicle combination, obtained by the purely mechanical action of the parking braking system, is sufficient.”

Paragraph 5.2.1.26., recalled for easy convenience:

“5.2.1.26. Special additional requirements for the electric transmission of the parking braking system”

Paragraph 5.2.1.26.4., amend to read:

“5.2.1.26.4. After the ignition/start switch which controls the electrical energy for the braking equipment has been switched off 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.

Furthermore, the parking brake shall be automatically applied, at least when the vehicle is detected to be stationary and additionally any of the following conditions is fulfilled:

- (a) **The ignition/start switch which controls the electrical energy for the braking equipment has been switched off and/or the key removed;**
- (b) **The driver is deemed to leave the driving seat (e.g. via a detection of door opening, unfastening of seat belt). Alternatively, for vehicles of category M, the parking brake shall be automatically applied if no input to any control by the driver nor any brakes application are detected for a time greater than 30 seconds.**

However, the automatic application of the parking braking system may be suppressed by the driver (e.g. during maintenance operation, manoeuvring situations, to avoid park brake freezing in winter conditions) with a dedicated action (e.g. by pedal actuation, a switch).”

Paragraph 12., amend to read:

“12. Transitional provisions

12.1. **As from the official date of entry into force of the 12 series of amendments, no Contracting Party applying this Regulation shall refuse to grant or refuse to accept type approvals under this Regulation as amended by the 12 series of amendments.**

12.2. **As from [1 September 2024], Contracting Parties applying this Regulation shall not be obliged to accept type approvals to the preceding series of amendments, first issued after [1 September 2024].**

- 12.3. **Until [1 September 2026], Contracting Parties applying this Regulation shall accept type approvals to the preceding series of amendments, first issued before [1 September 2024].**
- 12.4. **As from [1 September 2026], Contracting Parties applying this Regulation shall not be obliged to accept type approvals issued to the preceding series of amendments to this Regulation.**
- 12.5. **Notwithstanding paragraph 12.4., Contracting Parties applying this Regulation shall continue to accept type approvals issued according to the preceding series of amendments to this Regulation, for the vehicles which are not affected by the changes introduced by the 12 series of amendments.**
- 12.6. **Contracting Parties applying this Regulation may grant type approvals according to any preceding series of amendments to this Regulation.**
- 12.7. **Contracting Parties applying this Regulation shall continue to grant extensions of existing approvals to any preceding series of amendments to this Regulation.”**

Annex 4, paragraph 2.3., amend to read:

- 2.3. Parking braking system
- 2.3.1. The parking braking system shall, even if it is combined with one of the other braking systems, be capable of holding the laden vehicle stationary on an 18 per cent up or down-gradient.
- 2.3.2. On vehicles to which the coupling of a trailer is authorized, the parking braking system of the towing vehicle shall be capable of holding the combination of vehicles stationary on a 12 per cent up or down-gradient.
- 2.3.3. If the control is manual, the force applied to it shall not exceed 60 daN.
- 2.3.4. If it is a foot control, the force exerted on the control shall not exceed 70 daN.
- 2.3.5. A parking braking system which has to be actuated several times before it attains the prescribed performance is admissible.
- 2.3.6. To check compliance with the requirement specified in paragraph 5.2.1.2.4. of this Regulation, a Type-0 test shall be carried out with the engine disconnected at an initial test speed of 30 km/h. The mean fully developed deceleration on application of the control of the parking brake system and the deceleration immediately before the vehicle stops shall not be less than 1.5 m/s². The test shall be carried out with the laden vehicle. The force exerted on the braking control device shall not exceed the specified values.
- 2.3.7. **To check the compliance with the requirements specified in paragraph 5.2.1.26.4. of this Regulation, the automatic activation of the parking brake shall be checked by stopping the engine and additionally by leaving the cabin against the declared activation criteria and/or for vehicles of Category M by not operating any controls nor any brakes for a duration of at least 30 seconds.”**

II. Justification

This document proposes the new 12 series of amendments to UN Regulation No. 13. It is based on informal document GRVA-10-05 presented by expert from Germany and amendments it proposed by the experts from OICA in GRVA-10-33.