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#### **Economic Commission for Europe**

**Inland Transport Committee** 

**World Forum for Harmonization of Vehicle Regulations** 

Working Party on Automated/Autonomous and Connected Vehicles

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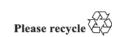
Geneva, 25 June 2024 Item 8(c) of the provisional agenda UN Regulations Nos. 13, 13-H, 139, 140 and UN GTR No. 8: Clarifications

# Proposal for amendments to UN Regulations Nos. 13 and 13-H

Submitted by the expert from the European Association of Automotive Suppliers (CLEPA) and from the International Organization of Motor Vehicle Manufacturers (OICA)\*

The text reproduced below was prepared by the experts from the European Association of Automotive Suppliers (CLEPA) and from the International Organization of Motor Vehicle Manufacturers (OICA), aimed at enabling the use of a positive lock type system as an alternative to a friction type parking braking system. It is based on informal document GRVA-18-08 and GRVA-18-09. The modifications to the existing text of the Regulation are marked in bold for new or strikethrough for deleted characters.

<sup>\*</sup> In accordance with the programme of work of the Inland Transport Committee for 2024 as outlined in proposed programme budget for 2024 (A/78/6 (Sect. 20), table 20.5), 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 for amendments to UN Regulation No. 13

Paragraph 5.2.1.10., amend to read (following subparagraphs indicated for best convenience):

"5.2.1.10. The service, secondary and parking braking systems shall act on braking surfaces connected to the wheels through components of adequate strength.

The parking braking system may use a mechanical locking device (e.g., gear lock, parking pawl) of adequate strength as an alternative to means acting on the braking surfaces to fulfil the requirements set out in annex 4, paragraph 2.3.1. and 2.3.2. of this Regulation.

Where braking torque for a particular axle or axles is provided by both a friction braking system and an electrical regenerative braking system of category B, disconnection of the latter source is permitted, providing that the friction braking source remains permanently connected and able to provide the compensation referred to in paragraph 5.2.1.7.2.1.

However in the case of short disconnection transients, incomplete compensation is accepted, but within one second, this compensation shall have attained at least 75 per cent of its final value.

Nevertheless, in all cases the permanently connected friction braking source shall ensure that both the service and secondary braking systems continue to operate with the prescribed degree of effectiveness.

Disconnection of the braking surfaces of the parking braking system shall be permitted only on condition that the disconnection is controlled by the driver from his driving seat or from a remote control device, by a system incapable of being brought into action by a leak.

The remote control device mentioned above shall be part of a system fulfilling the technical requirements of an ACSF of Category A in the 02 series of amendments to UN Regulation No. 79 or later series of amendments."

### II. Proposal for amendments to UN Regulation No. 13-H

Paragraph 5.2.10., amend to read (following subparagraphs indicated for best convenience):

"5.2.10. The service, secondary and parking braking systems shall act on braking surfaces connected to the wheels through components of adequate strength.

The parking braking system may use a mechanical locking device (e.g., gear lock, parking pawl) of adequate strength as an alternative to means acting on the braking surfaces to fulfil the requirements set out in annex 3, paragraphs 2.3.1. and 2.3.2. of this Regulation.

Where braking torque for a particular axle or axles is provided by both a friction braking system and an electrical regenerative braking system of category B, disconnection of the latter source is permitted, providing that the friction braking source remains permanently connected and able to provide the compensation referred to in paragraph 5.2.7.1. above.

However, in the case of short disconnection transients, incomplete compensation is accepted, but within 1s, this compensation shall have attained at least 75 per cent of its final value.

Nevertheless, in all cases, the permanently connected friction braking source shall ensure that both the service and secondary braking systems continue to operate with the prescribed degree of effectiveness.

Disconnection of the braking surfaces of the parking braking system shall be permitted only on condition that the disconnection is controlled by the driver

from his driving seat or from a remote control device, by a system incapable of being brought into action by a leak.

The remote control device mentioned above shall be part of a 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."

#### III. Justification

This amendment enables the use of a positive lock type system as an alternative to a friction type parking braking system to fulfil the static requirements of UN Regulations Nos. 13 and 13-H for parking braking systems.