

**Proposal for amendments to the 01 series of amendments to UN Regulation No. 13-H
 and to UN Regulation No. 13**

This document supersedes GRRF-86-16.

1. Proposal

UN Regulation No. 13-H

Paragraph 5.2.10 amend to read:

"5.2.10. The service, secondary and parking braking systems shall ...

...

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 ~~exclusively~~ 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 Regulation No. 79.02 or later series of amendment."

Paragraph 5.2.19.4. amend to read:

"5.2.19.4. 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 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 Regulation No. 79.02 or later series of amendment."

Paragraph 5.2.22.4. and corresponding footnote amend to read:

"5.2.22.4. Electric regenerative braking systems as defined in Paragraph 2.17., of this Regulation, which produce a retarding force upon release of the accelerator control, shall generate the signal mentioned above 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 0.7m/s^2 (¹).~~

(1) ~~At the time of type approval, compliance with this requirement shall be confirmed by the vehicle manufacturer."~~

UN Regulation No. 13

Paragraph 5.2.1.10. amend to read:

"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.

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 1 s, 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 ~~exclusively~~ 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 Regulation No. 79.02 or later series of amendment."

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 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 Regulation No. 79.02 or later series of amendment."

2. Justification

Paragraph 5.2.10. and 5.2.19.4 of UN R13-H and 5.2.1.10 and 5.2.1.26.4. of UN R13

The new series 02 of UN Regulation No. 79 introduced requirements for RCP (remote controlled parking) systems. A RCP system requires the engagement of an EPB (electrical parking brake) once the manoeuvre has finished and the ignition is switched off. The suggested modifications allow the release / disconnection of the EPB by a remote control system (approved to Regulation 79) what is needed to enable the exit of the vehicle out of a parking spot with a remote control system.

The use of the cross-reference to UN R79 is a regular means already used in similar cases. For example at previous GRRF session of December 2017 (85th), R79 series 03 paragraph 5.1.6.1.1 includes cross reference to UN R13, R13H and R140.

Additionally, the proposed wording is based on ECE/TRANS/WP.29/GRRF/2013/13 (see GRRF-86 agenda item 3(c)).

Paragraph 5.2.22.4 of UN R13-H

For electric regenerative braking the illumination of the stop lamp is currently prohibited below 0.7m/s² deceleration. However, there should be a possibility to implement “one pedal driving” for full electric vehicles, where smooth deceleration (covering e.g. 80% of “normal” braking that would be necessary with a conventional friction braking system) may be ensured by the release of the accelerator pedal, and the brake pedal ~~might be~~ only be necessary for higher decelerations. Such implementation would provide more driving comfort and maximize the number and duration of regeneration phases. In such cases the illumination of the stop lamp should not be prohibited below 0.7 m/s² deceleration or whilst stationary. For example, switching off the stop lamps towards the end of a full stop may be misinterpreted by the driver of a following vehicle, e.g. as an intention to accelerate.

The proposed amendments also align the requirements of stop lamp activation resulting from regenerative braking with those from paragraph 5.2.1.30.2. of UN Regulation No. 13.